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Baker City, Oregon 97814

September 1997

The Northeast Oregon Assembled Land Exchange (NOALE) and Environmental Impact Statement

Ditch Creek drainage, within the JV Ranch acquisition area.

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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Environmental Impact Statement

Applicants: Pioneer Resources
JV Ranch
Prairie Wood Products
Various private landowners

BLM Offices: Prineville District, and Baker Resource Area in Vale District

Location of Proposed Action: See Figure 1-1 and Maps 1-4

March 3, 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Prineville District Office
P.O. Box 550 (3050 N.E. 3rd Street)
Prineville, Oregon 97754

IN REPLY REFER TO:

2200 September, 1997

Dear Public Land User,

Thank you for your interest in the Northeastern Oregon Assembled Land Exchange and proposed Resource Management Plan (RMP) maintenance for retention, exchange, and disposal of public land. The enclosed Phase 1 assembled exchange action, plan maintenance, and draft environmental impact statement (EIS) address alternatives for the identification and management of specific parcels that may be disposed to more effectively meet ecosystem management objectives and to consolidate BLM-managed lands for more effective and efficient resource protection, enhancement and use, while assuring that retained lands have sufficient public benefit to merit the costs of management.

The document has been prepared using available scientific information on the regional issues for several sensitive resources and fish and wildlife habitats. The environmental impact statement demonstrates how the original assembled land exchange proposal was redefined by BLM to provide retention of areas with major public values (as described in alternative 1).

A "No Action" (Alternative 2) strategy would allow continuation of case-by-case exchanges without a comprehensive overview or strategy. The third alternative was specifically designed to reflect concerns identified during public scoping.

The purpose of the environmental impact statement is to analyze probable environmental impacts of the three alternatives, including the BLM's preferred alternative. We would appreciate your comments on the adequacy of the analysis. Types of comments that are most useful in the analysis and decision process include comments that:

- Are as specific as possible, identifying values by parcel number or legal description as shown in the text, tables, and maps.
- Address appropriateness of alternatives, including parcels that should be added or deleted from the proposed exchange for specific resource values in Alternatives 1 and 3.
- Identify unaddressed issues (but please note our concurrent formal consultation efforts under the Endangered Species Act, and coordination and consultation with various State, local and Tribal leaders).
- Provide new information, especially where parcel or area-specific where it may influence either land retention or acquisition.
- Address adequacy of analysis and described expected impacts.
- Identify errors in data or analysis.

Please keep in mind that this is an environmental impact statement and the decision makers may accept known or assumed significant environmental impacts on BLM-managed lands following exchange into private ownership, providing the acquired lands are expected to provide long-term compensating values and enhanced protection for regionally significant resources.

Public comments may be mailed to the Prineville BLM District Office, Attention: Dick Cosgriffe, Area Manager; P.O. Box 550, Prineville, OR 97754; or they may be presented at public meetings schedule between the first and second weeks of November at the following locations each at 7pm:

John Day: Alec Gay Hall
Heppner: 171 West Linden Way, Heppner
Pendleton: Doubletree Inn, 204 S.E. Nye Avenue, Pendleton
Baker City: Sunridge Inn, 1 Sunridge Place, Baker City

Please contact Steve Davidson, Baker City, (541) 523-1349 and/or Ron Lane, Prineville (541) 416-6752 for final meeting dates.

All comments must be submitted by December 16, 1997. Comments, including names and addresses of respondents, will be available for public review at the Prineville District and Baker Resource Area offices during regular business hours (7:45 a.m. to 4:45 p.m.), Monday through Friday, except holidays, and may be published in whole or in part in the final EIS or other related documents. Copies of the comments will also be included in the public book at the Heppner Library.

Individual respondents may request confidentiality. If you wish to withhold your name or address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

A proposed decision will be prepared after review of all public and interagency comments and revisions, corrections, or adjustments made to the environmental impact statement. Any person who participated in the planning process and has an interest that is or may be adversely affected by the proposed decision will have the opportunity to protest such decision after it has been made available, in accordance with 43 Code of Federal Regulations 1610.5-2.

Preliminary issues, a draft of retention and disposal criteria, and possible alternatives were identified in scoping documents and subsequent newsletters to known interested parties. The concerns and issues that were identified are also summarized in Chapter 1. Numerous suggestions from the public input have been incorporated into this plan maintenance and assembled exchange proposal. We feel this document portrays the best array of alternatives concerning land tenure adjustments.

If you would like further information about the RMP amendments and plan maintenance for the land tenure zone change, assembled exchange, or environmental impact statement process beyond what is presented in this document, or at the open house and public meetings, please contact Dick Cosgriffe or Ron Lane at the BLM's Prineville District (541) 416-6700; or Penny Dunn or Dorothy Mason at the BLM's Baker Resource Area (541) 523-1256.

Some of the supporting record that is germane to this analysis and not subject to exemption under the Freedom of Information Act will also be available for inspection during normal working hours at the following BLM offices:

John Day Project Office, 431 Patterson Bridge Road, John Day, Oregon
Prineville District Office, 3050 N.E. 3rd St., Prineville, Oregon
Baker Resource Area, 3165 10th, Baker City, Oregon
Vale BLM District Office, 100 Oregon Street, Vale, Oregon
Oregon State BLM "Land Office"; 1515 SW Fifth Street (7th floor), Portland, Oregon

The draft EIS does not include any Biological Assessments prepared under requirements of the Endangered Species Act, specific parcel appraisals, timber cruises on private lands offered under the exchange, or names of private citizens who may have participated in the planning and analysis record but have not given permission to release their names and addresses. Biological Assessments are being prepared and will be available for public review prior to the exchanges.

We appreciate the public involvement to date and encourage your continued interest in the management of public lands in the Central Oregon and Baker Resource Areas in the Prineville and Vale Districts, respectively.

Sincerely,

Donald L. Smith
for) James L. Hancock
District Manager, Prineville

Ed Singleton
Ed Singleton
District Manager, Vale

Enclosure: As stated above

Acronyms

ACEC	Area of Critical Environmental Concern
ACOE	Army Corps of Engineers
AIRFA	American Indian Religious Freedom Act
ARPA	Archaeological Resources Protection Act
ATV	All terrrain vehicle
AUM	Animal Unit Month
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
cfs	cubic feet per second
CFL	Commercial forestland
CFR	Code of Federal Regulations
CLE	Clearwater Land Exchange
CTWS	Confederated Tribes of Warm Springs
CTUIR	Confederated Tribes of Umatilla Indian Reservation
DBH	diameter at breast height
DEQ	Department of Environmental Quality
EA	environmental assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	Ecologically significant unit
FEMA	Federal Emergency Management Agency
FLPMA	Federal Land Policy Management Act
FR	Federal Register
HMA	herd management area
HMP	habitat management plan
JODA	John Day Fossil Beds National Monument
LSF	Loggins storage facililty
MFP	management framework plan
MBF	thousand board feet (timber measurement)
MMBF	million board feet (timber measurement)
MOU	memorandum of understanding
NAGPA	Native American Graves Protection Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOALE	Northeast Oregon Assembled Land Exchange
NWR	National Wildlife Refuge
ODFW	Oregon Department of Fish and Wildlife
OHV	Offhighway vehicle
ONHP	Oregon Natural Heritage Program
OR/WA	Oregon/Washington
OWRD	Oregon Water Resources Department

PACFISH	Environmental Assessment for the Implementation of Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California
PFC	Proper functioning condition
PNC	potential natural community
ppb	parts per billion
ppm	parts per million
PUF	prime and unique farmlands
RA	resource area
RHCA	Riparian Habitat Conservation Area (PACFISH)
RM	river mile
RMP	Resource management plan
ROD	Record of Decision
TCP	traditional cultural property
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Service
VRM	Visual Resources Management
WSA	Wilderness Study Act
WSR	Wild and Scenic River

Executive Summary

Background

The Northeast Oregon Assembled Land Exchange (NOALE) environmental impact statement addresses the potential disposal of between 75,000 and 90,000 acres of BLM-managed public lands and potential acquisition of approximately 70,000 acres of equitably valued lands in Grant, Umatilla, Morrow, Wheeler, Baker, Wallowa, and Union counties. These lands are within the Central Oregon and Baker Resource Areas in the Prineville and Vale Bureau of Land Management Districts, respectively. This EIS also addresses plan maintenance for the Baker Resource Management Plan to create a 3-zone land tenure adjustment strategy.

This exchange proposal is both an assembled and facilitated (by private entity) action where lands from multiple ownerships (public and private) are brought together in a common pool for exchange or sale to other ownerships.

Land tenure adjustments in northeast central Oregon have been discussed for over ten years. The need to improve management efficiency through the land tenure adjustment program (disposal of small, isolated tracts for larger blocks of contiguous lands) was identified in the John Day RMP of 1984, its Record of Decision (ROD) of 1985, and a subsequent RMP Amendment of 1995. The exchanges would implement most land tenure adjustments addressed in the Baker, Two Rivers, and John Day RMPs.

Scope of the Proposal

Because of the complexity and size of NOALE, the exchanges would occur in an initial Phase 1 and future exchanges. Phase I would involve disposal of approximately 50,000 acres of public lands primarily in Grant County, with lesser amounts in Umatilla, Morrow, and Wheeler counties. Future exchanges would involve lands primarily in Baker, Union and Grant counties, with lesser amounts in Umatilla, Morrow, Wallowa, and Wheeler counties. This executive summary focuses on resource values of lands identified for Phase 1.

Private lands to be acquired in future phases have not all been specifically identified as yet; however, they must meet certain criteria as discussed in Chapter 1 of this EIS. Most private lands to be acquired are expected to be in Baker and Grant counties, but could also be in Union, Wallowa, Morrow, and/or Umatilla counties. Environmental Assessments (EA), tiered to this EIS, would be prepared for future exchanges. The EAs would further describe the resources on the public and private lands involved and the impacts resulting from the exchanges.

Two alternatives (Alternative 1 - Preferred and Alternative 3 - Retention) and the No Action Alternative (Alternative 2) were developed and analyzed to address a range of actions and to consider issues about the exchange. Both action alternatives (1 and 2) propose repositioning of BLM's land assets from many scattered tracts into contiguous blocks of public lands with high resource values.

The alternatives respond to six issues and concerns identified in the planning and public scoping process, which consisted of public meetings, public tours, newsletter mailings, and consultations with Federal and state agencies, and local and tribal governments. The issues identified during this process were:

- *Resource management on tracts considered for disposal or acquisition* (Including presumed changes in land use following the exchange).
- *Land Manageability* (Includes public access and administrative costs of managing isolated, scattered tracts).
- *Wildlife Habitat* (Includes old-growth habitat and riparian areas/wetlands).
- *Columbia Basin Shrub-Steppe Habitat* (Discussed separately due to its uniqueness as an important vegetation component in the Umatilla Basin).
- *Forestlands Containing a Large Tree Component* (Included in the forestland discussion for forest stands containing trees over 21" in DBH).
- *Socioeconomics* (Including effects on county revenues, employment changes due to changing timber harvest levels, and impacts to local livestock industry and recreational opportunities).

Phase I Exchanges

The Preferred Alternative (Alternative 1) proposes the potential disposal of approximately 50,000 acres of public lands, primarily on scattered tracts, and the acquisition of approximately 47,400 acres, mostly on the North Fork John Day River and tributaries (about 43,000 acres), and lesser amounts on the South Fork John Day River and tributaries. Acquisition lands contain nearly 60 miles of salmonid fish habitat (54 miles anadromous), 286-500 acres of riparian habitat on 71.5 miles of perennial streams, important big game wintering habitat for 1,200-1,500 elk and 3,000-4,000 mule deer, and a wide range of recreational opportunities accessible on contiguous blocks of land (Table S-1). Of the lands considered for disposal, nearly 80 percent lack public access and approximately 80 percent are 80 acres or less in size. In contrast, the potential acquisition lands are large blocks of contiguous lands that would be accessible to the general public.

Alternative 3 (Retention Alternative) proposes the potential disposal of approximately 33,400 acres of public lands, primarily on scattered tracts, and the acquisition of approximately 19,200 acres on uplands and tributaries of the North Fork John Day River (JV Ranch). Potential acquisition lands contain nearly 18 miles of anadromous salmonid fish habitat, 74-130 acres of riparian habitat on 18.5 miles of perennial streams, important big game wintering habitat for 1,200-1,500 elk and 3,000-4,000 mule deer, and a wide range of recreational opportunities accessible on one contiguous block of land (Table S-1). In comparison to the Preferred Alternative, the key difference is that the Retention Alterative would retain all potential disposal tracts that contain Columbia Basin Shrub-Steppe habitat or forestlands with a large tree component. This alternative was analyzed to respond to concerns about these habitats.

Anticipated impacts for Phase I of the exchange proposal are discussed below by resource value.

Vegetation: Long-range improvements would be expected in vegetative condition under Alternatives 1 and 3. Little change is anticipated under Alternative 2.

Forestlands Containing Large Tree Component: In Alternative 1, there would be a net gain of 511 acres of forestlands containing large tree component. In the long term, moderate benefits are expected because these are contiguous lands that can be managed more effectively. The moderate rating is due to the density of large trees on acquisition lands being less than on disposal lands. Alternative 3 would result in slight benefits with a net gain of 370 acres of forestlands containing large tree component.

Riparian Areas/Water: Under Alternative 1, substantial improvements could be expected in riparian habitats and water quality with the acquisition of over 71 miles of perennial streams (approximately 12.5 perennial stream miles are on disposal lands). Moderate improvements to water quality and riparian habitats is expected under Alternative 3 with the acquisition of over 18 miles of perennial streams (2.2 miles disposal).

Columbia Basin Shrub-Steppe Habitat: Under Alternative 1, approximately 2,000 acres of this habitat type would be disposed; however, only about 100 of these acres are in good ecological condition with a full component of native plant species. About 215 acres of this shrub steppe habitat on four parcels would likely be converted to agricultural or urban uses, impacting the resource slightly. Vegetation on the remaining disposal parcels (including all that are in good ecological condition) would not be substantially affected, as current uses would likely continue. Under Alternatives 2 and 3, this habitat type would be retained; current uses would continue, causing no impacts to the current condition of these parcels.

Wildlife Habitat: Wildlife habitats would benefit substantially under Alternative 1. Over 71 miles of riparian habitat crucial for many wildlife species would be acquired. For comparison, 12.8 miles of riparian habitat (on 33 parcels) is considered for disposal. Critical winter range supporting 1,200-1,500 elk and 3,000-4,000 mule deer, as well as historic California bighorn sheep habitat, would also be acquired.

Wildlife habitat would benefit moderately under Alternative 3. Crucial big game winter range and a net gain of 14 miles of riparian habitat could be acquired.

Old-Growth Forest Habitat: There would be a net loss of 527 acres of old-growth forest habitat (1,127 acres disposed, 600 acres acquired) under Alternative 1. This would have slight to moderate impact on wildlife species dependent on this habitat type. Under Alternatives 2 and 3, no old-growth forest habitat would be disposed.

Fisheries: Fish habitats would benefit substantially under Alternative 1 (net gain of 51 miles of habitat). The benefits of an additional 59 miles of fish habitat within contiguous land blocks and adjacent to National Forest lands would outweigh the potential impacts on stream segments considered for disposal (8.25 miles on 26 parcels).

Table S-1. Summary Comparison of Alternatives (Phase 1 Exchanges)

Element	*Alternative 1 (Preferred)*	*Alternative 2 (No Action)*	*Alternative 3 (Retention Areas)*
Public Land Identified for Potential Disposal	50,140 acres	Subject to requests, tract-by-tract.	33,440 acres
Private Land Identified for Potential Acquisition	47,400 acres	Subject to request, tract-by-tract.	19,240 acres
Riparian Habitat (perennial stream/riparian acres)			
Potential Disposal	12.8 mi./51-90 acres	N/A	5.0 mi./20-35 acres
Potential Acquisition	71.5 mi./286-500 acres		18.5 mi./74-130 acres
Anadromous and Resident Trout Salmonid Habitat			
Potential Disposal	8.54 miles	N/A	3.60 miles
Potential Acquisition	59.40 miles		17.70 miles
Commercial Forestlands			
Potential Disposal	7,646 acres	N/A	1,134 acres
Potential Acquisition	10,634 acres		1,160 acres
Forestlands Containing Large Tree Component			
Potential Disposal	4,299 acres	N/A	0
Potential Acquisition	4,810 acres		370 acres
Old-growth Forest Habitat			
Potential Disposal	1,128 acres	N/A	0
Potential Acquisition	600 acres		70
Columbia Basin Shrub-Steppe Habitat			
Potential Disposal	2,089 acres	N/A	0
Potential Acquisition	0 acres		0
Number of Grazing Allotments			
Potential Disposal	125 allotments	N/A	50
Potential Acquisition	5 allotments		1
Legal Access (# of tracts/# of acres)			
Potential Disposal	90 tracts/15,190 acres		34 tracts/9,900 acres
Potential Acquisition	18 tracts/47,400 acres		1 tract/19,240 acres

[1] Acres/miles are estimates only and may not be additive in many cases due to overlapping resource use/value.

Fish habitats would benefit slightly to moderately under Alternative 3 (net gain of 14 miles of habitat).

Special Status Species: Alternative 1 would have positive impacts to Federally listed threatened and endangered species. The North Fork John Day River serves as wintering habitat for bald eagles. Three bald eagle roosts that are currently on lands in private ownership would be included in the acquisition, and an additional 12 bald eagle roost sites exist on BLM-managed lands that are adjacent to blocks of private lands considered for acquisition. Federal management of these surrounding private lands could prove beneficial to this species in the long term. Approximately 12 miles of winter migrating bull trout habitat could be acquired on the North Fork (bull trout are a Proposed Threatened species). Only 0.6 miles (two parcels on the Middle Fork John Day) of historic bull trout habitat (currently unoccupied) would be disposed. Under Alternative 3, bald eagles may utilize habitat acquired on tributaries within the JV Ranch (Wall Creek and Ditch Creek drainages); no bull trout habitat would be acquired or disposed.

Further, no Federally listed plant species were found on any of the potential disposal parcels and none are known to exist on the proposed acquisition parcels.

Recreational Opportunities: Under Alternative 1, acquiring about 43,000 acres of blocked, contiguous lands along the North Fork John Day River and tributaries would provide outstanding opportunities for dispersed recreation including fishing, hunting, hiking, camping, mountain biking, and wildlife viewing. Fewer opportunities would be available under Alternative 3, as only 20,000 acres would be acquired in a large block. Generally, there are few recreational opportunities on disposal tracts that do have legal access due to their small size.

Access: The public's ability to access BLM-managed lands would be greatly enhanced under Alternative 1. Approximately 47,400 acres on 18 parcels of acquisition lands would be accessible by the general public, while only 15,190 acres (on 90 tracts) of the 50,000 acres considered for disposal currently have legal access. Under Alternative 3, 19,000 acres of acquisition lands (one tract) would be accessible, while 9,900 acres (34 tracts) of the 33,400 acres considered for disposal currently have legal access.

Wild and Scenic Rivers: Acquisition of 4 miles of the South Fork John Day Wild and Scenic River under Alternative 1 would improve BLM's ability to protect and manage the river's outstandingly remarkable values. A net gain of 1,140 acres within the proposed Wild and Scenic River boundary (1,270 acquisition acres, 130 disposal acres within the boundary) could come into BLM management.

FEMA-Designated Floodplains: BLM holdings of designated floodplains would show a net increase of 60 acres (South Fork John Day River) under Alternative 1. Another 220 acres of non-designated floodplains could be acquired on the North Fork John Day River. Floodplain function would be expected to improve under public ownership and management when large blocks are acquired. No impacts to designated floodplains would occur under Alternative 3.

Soils: Minor impacts to upland and lowland soils is anticipated from timber harvesting activities and agricultural/urban conversion of rangelands under Alternatives 1 and 3.

Cultural Resources/Traditional Use Areas: Consolidation of public lands along the North Fork John Day River and its tributaries and the South Fork John Day River under Alternative 1 would moderately enhance tribal access to usual and accustomed hunting and gathering areas. Disposal of Federal lands would reduce or eliminate opportunities for tribes to use some traditional areas; however, treaty-reserved rights and traditional uses would apply to all newly acquired lands, which would potentially reduce the effect of land disposal on tribal interests.

Under the No Action Alternative (Alternative 2) , BLM's knowledge of culture resources on public lands considered for disposal would be greatly enhanced because of extensive surveys conducted on those lands. However, cultural use of most parcels is subject to securing legal access.

Alternative 3 would slightly improve tribal access to traditional use areas and dispose less public lands that may contain cultural resources.

Paleontological Resources: Under Alternative 1, there would be loss of some geologic features containing fossils. However, the information gained through the inventory process would provide important data otherwise lost forever. Under the No Action Alternative (Alternative 2), BLM's knowledge of paleontological resources on public lands considered for disposal would be greatly enhanced because of extensive surveys conducted on those lands. Similarly, Alternative 3 would allow for the gain of important information without substantial loss of lands containing geologic features with fossils.

Timber Resources: In the short term, BLM would have less commercial timber volume available for harvest under Alternative 1. Disposal forestlands (7,646 acres) contain approximately 60 million board feet, while acquisition lands (10,634 acres) contain approximately 45 million board feet. In the long term, BLM would benefit from having a larger commercial forest acreage base capable of producing more timber than the current ownership and management status. No change is anticipated under Alternative 3 in BLM's commercial forest base capacities.

Livestock Grazing: Little change is anticipated in grazing uses, except that appropriate use levels would be determined on acquisition lands that protect habitat for special status species. Administration duties and efficiencies would be greatly improved under Alternative 1 due to approximately 125 grazing allotments being fully or partially eliminated on disposal lands. About five allotments would be formed or expanded from existing grazing allotments on acquisition lands.

Under Alternative 3, approximately 50 grazing allotments would be fully or partially eliminated, with only one existing allotment expanded. Like Alternative 1, this alternative would substantially decrease grazing administration duties, allowing for more involved livestock grazing management on lands that possess high resource values and blocked lands.

Air Quality: Slight immeasurable impacts to air quality could occur under Alternative 1, particularly since 11 rangeland tracts could be converted to agriculture uses and 5 parcels to urban uses and construction in the Umatilla Basin. Under Alternative 3, minor immeasurable impacts to air quality are anticipated.

Land Manageability/Efficiency: Land manageability would be greatly enhanced under Alternative 1. Approximately 80 percent of the tracts considered for disposal are 80 acres or less in size, and nearly 80 percent of the tracts lack public access. Because of the scattered pattern and small size, these disposal tracts are difficult and inefficient to manage and cause many administrative problems for both public and private land managers. By contrast, acquisition lands are generally large blocks and would be accessible to the public for a variety of uses and enjoyment. Land manageability would also be improved under Alternative 3, but substantially less than under Alternative 1.

Socioeconomic Values: Under Alternative 1, socioeconomic values would be enhanced slightly to moderately. Disposal of forested tracts would provide timber to local mills. Ranch managers would benefit by eliminating BLM-managed land inholdings, thereby increasing efficiency in their ranch operations. Alternative 3 would have little impact on socioeconomics, but some ranches would be more efficient after eliminating BLM-managed land inholdings within their property boundaries.

Cumulative Impacts of the Entire Proposal

Although many future exchanges are not yet defined, the overall impacts of the entire proposal exchange parcels identified to date are portrayed in Table S-2.

The cumulative effect of implementing the land tenure adjustments described in this EIS, coupled with existing decisions implemented by other land-managing Federal, state and local agencies in the area, is expected to have a regionally limited long-term positive effect. Table S-3 delineates the specific anticipated impacts of the exchange proposal, including both Phase 1 and future exchanges identified to date.

Table S-2. Summary of Overall Impacts to all Resources by Alternatives

Resource Element	Alternative 1 (Preferred)[1]	Alternative 2 (No Action)	Alternative 3 (Retention)
Vegetation	+M	NC	+L
Forestlands with large tree component	+M	NC	+L
Riparian Areas/Water	+H	NC	+M
Columbia Basin Shrub-Steppe	-L	NC	NC
Wildlife	+H	NC	+M
Old-Growth Forest Habitat	-M	NC	NC
Fisheries	+H	NC	+M
Threatened and Endangered Species	+H	NC	+L
Recreational Opportunities	+H	NC	+M
Access	+H	NC	+M
Wild and Scenic Rivers	+M	NC	NC
FEMA[2] Designated Floodplains	+L	NC	NC
Soils	-L	NC	-L
Cultural Resources/Traditional Use Areas	+M	NC	+L
Paleontological Resources	+M	NC	+L
Timber Resources	-L	NC	NC
Livestock Grazing	NC	NC	NC
Air Quality	-L	NC	-L
Land Manageability/Efficiency	+H	NC	+M
Socioeconomic Values	+L	NC	NC

[1] + = Beneficial
M = Moderate
- = Adverse
L = Low
H = High
NC = No Change

[2] Federal Emergency Management Act

The cumulative effect of implementing the land tenure adjustments described in this EIS, coupled with existing decisions implemented by other land-managing Federal, state and local agencies in the area, is expected to have a regionally limited long-term positive effect. Table S-3 delineates the specific anticipated impacts of the exchange proposal, including Phase 1 and future exchanges identified to date.

Table S-3. Cumulative Impact Comparison of Alternatives for Entire Proposal (Phase I and Future Exchanges) [1]

Element	*Alternative 1 (Preferred)*	*Alternative 2 (No Action)*	*Alternative 3 (Retention Areas)*	*Notes*
Public Land Identified for Potential Disposal	92,209 acres	Subject to requests, tract-by-tract.	57,090 acres	
Private Land Identified for Potential Acquisition	69,540 acres in John Day & Umatilla Basins plus undetermined lands in Grande Ronde & Powder River Basins	Subject to request, tract-by-tract.	19,240 acres in John Day Basin plus undetermined lands in Grande Ronde & Powder River Basins	Undetermined acquisitions to be of equal value to disposed lands.
Riparian Habitat (perennial stream/riparian acres)				Potential disposal of riparian not yet determined for Powder River Basin.
Potential Disposal	38.1 mi./141-264 acres	N/A	10.4mi./41-73 acres	
Potential Acquisition	82.1 mi./328-574 acres plus undetermined riparian values in Grande Ronde & Powder River Basins		18.5 mi./74-130 acres in John Day Basin plus undetermined riparian values in Grande Ronde & Powder River Basins	
Anadromous and Resident Trout Salmonid Habitat				
Potential Disposal	13.95 miles	N/A	5.83 miles	
Potential Acquisition	67.2 miles plus undetermined salmonid habitat in Grande Ronde & Powder River Basins		17.70 miles plus undetermined riparian values in Grande Ronde & Powder River Basins	

Table S-3. Cumulative Impact Comparison of Alternatives for Entire Proposal (Phase I and Future Exchanges) [1]

Element	***Alternative 1 (Preferred)***	***Alternative 2 (No Action)***	***Alternative 3 (Retention Areas)***	***Notes***
Commercial Forestlands				
Potential Disposal	16,109 acres	N/A	3,966 acres	
Potential Acquisition	19,824 acres plus undetermined forest land in Grande Ronde & Powder River Basins		1,160 acres plus undetermined forest land in Grande Ronde & Powder River Basins	
Forestlands Containing Large Tree Component				
Potential Disposal	7,859 acres	N/A	0	
Potential Acquisition	7,200 acres plus undetermined forest land in Grande Ronde & Powder River Basins		370 acres plus undetermined forest land in Grande Ronde & Powder River Basins	
Old-growth Forest Habitat				
Potential Disposal	2,914 acres	N/A	0 acres	
Potential Acquisition	870 acres plus undetermined forestland in Grande Ronde & Powder River Basins		0 acres plus undetermined forestland in Grande Ronde & Powder River Basins	
Columbia Basin Shrub-Steppe Habitat				
Potential Disposal	5,193 acres	N/A	0 acres	
Potential Acquisition	0 acres		0 acres	

Table S-3. Cumulative Impact Comparison of Alternatives for Entire Proposal (Phase I and Future Exchanges) [1]				
Element	***Alternative 1 (Preferred)***	***Alternative 2 (No Action)***	***Alternative 3 (Retention Areas)***	***Notes***
Number of Grazing Allotments Potential Disposal Potential Acquisition	 222 allotments 5 allotments plus an undetermined number in Grande Ronde & Powder River Basins	N/A	 89 allotments 1 allotment plus an undetermined number in Grande Ronde & Powder River Basins	Number of new allotments likely to be very small in Grande Ronde & Powder River Basins.
Legal Access	For analysis purposes, legal access to acquired lands is assumed to match the 3:1 ratio to disposed lands in Phase 1.		For analysis purposes, legal access to acquired lands is assumed to match the 2:1 ratio to disposed lands in Phase 1.	

[1] Acres/miles are estimates only and may not be additive due to overlapping resource use/value.
Undetermined values represent present data gaps that will be inventoried and analyzed in future land exchange environmental assessments tiered to this EIS.

Reader's Guide

Document Organization

This reader's guide is intended to give the reader an overview of how the Northeast Oregon Assembled Land Exchange EIS is organized, to explain some terms used throughout the document, and to provide guidance on how to locate the parcels of land on the maps by their legal description.

The main document text is presented in four chapters:

- Chapter 1 - Introduction
- Chapter 2 - Alternatives
- Chapter 3 - Affected Environment
- Chapter 4 - Environmental Consequences

For purposes of discussion and analysis, the parcels of land identified for acquisition and disposal are grouped by four geographic areas:

- John Day River Basin
- Umatilla River Basin
- Grande Ronde River Basin
- Powder River Basin

Information presentation in Chapters 3 and 4 follow this grouping convention, with separate sections for each basin.

An overview of environmental characteristics is provided for each of the four basins as they are introduced in Chapter 3. The affected environment identifies resource values, first for the general basin, then for private lands considered for acquisition, and then for public lands considered for disposal, for each basin in the order listed above.

Chapter 4 (Environmental Consequences) describes the expected impacts from the alternatives. Impacts that are common to all basins are identified first, followed by basin and parcel-specific impacts for disposal and acquisition lands identified to date. Impacts are most specific for Phase 1 exchanges, most of which are located in the John Day Basin. Some impacts are provided for future exchanges.

The document's eight maps are included in a map packet.

The tables in Appendix A list public lands identified for potential disposal, potential acquisition lands or areas of acquisition interest, retention parcels for

Alternative 3, lands dropped from the exchange proposal, disposal parcels that are forested, disposal parcels presumed for other use, and resource assessments for some potential disposal parcels.

Appendix B includes tables that identify wildlife, plant, and fisheries resources on the potential disposal lands, including special status species and old-growth habitat.

How to Locate Parcels on Maps

The following text, along with Figure RG-1, describes a township, range, and section.

Township and Range: A township is a public land survey unit, normally a quadrangle, measuring approximately 6 miles on each side or 36 square miles. The boundaries of a township conform to meridians (north-south) and parallels (east-west) within established limits (Figure RG-1, division of tract into township). The north and south meridian boundaries of a township are termed "range lines"; the east and west parallel boundaries of a township are termed "township lines."

Each township has 36 sections, some of which are designed to correct for converging meridians or range lines. The sections are numbered 1 to 36, starting from the upper right of the township, reading left six sections, down and to the right six sections, etc. (Figure RG-1, township showing adjoining sections).

Section: A section is a township subdivision unit, normally rectangular in shape, measuring one square mile or 640 acres. Examples of various section descriptions are shown on Figure RG-1, section diagram.

Locating Specific Parcel: Parcels are referenced in the text by parcel numbers. To locate a specific parcel, find the number on the parcel list in Appendix A, Table A-1b, which lists its legal description (township, range, and section). Then, from the map packet, locate the map that has the same township and range. Next, locate the listed section.

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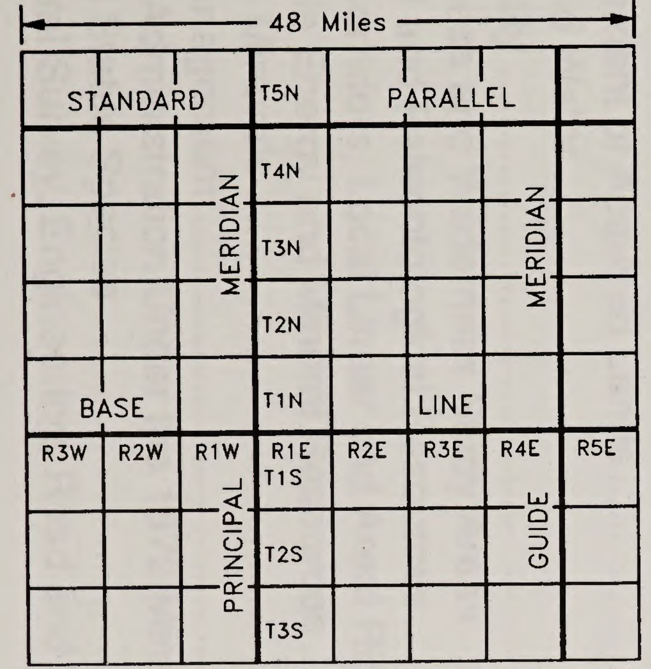
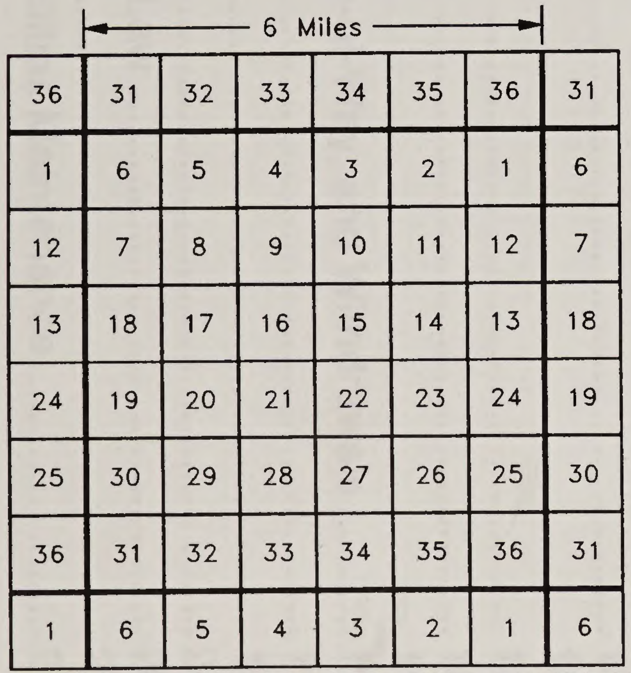
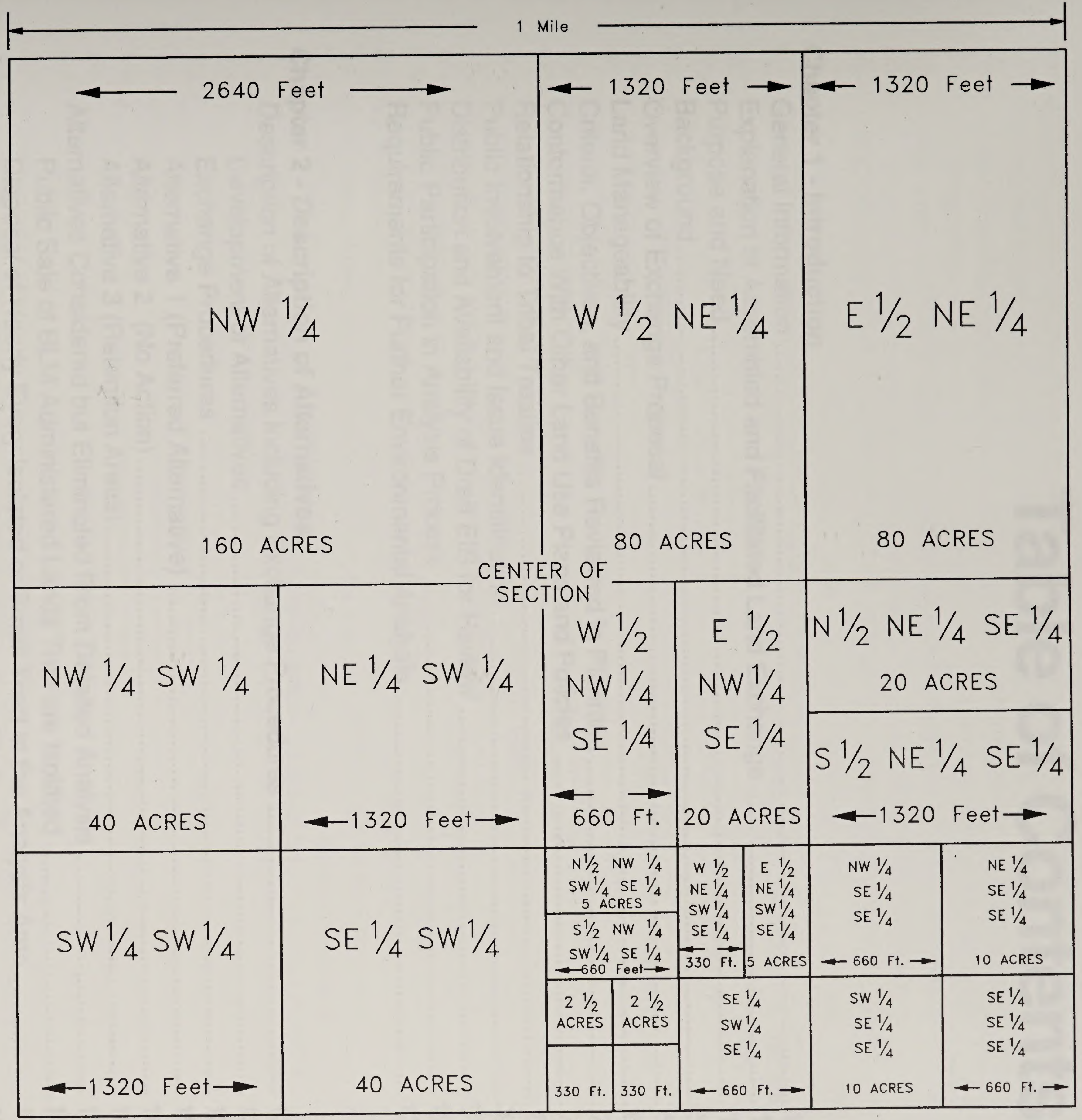
Figure RG-1



DIVISION OF TRACT INTO TOWNSHIP



TOWNSHIP SHOWING ADJOINING SECTIONS



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Chapter 1 - Introduction

General Information

This environmental impact statement (EIS) addresses a land exchange proposal involving potential disposal of between 75,000 and 90,000 acres of public lands and potential acquisition of over 70,000 acres of private lands. The proposal is being made by the Central Oregon and Baker Resource Areas in the Prineville and Vale Bureau of Land Management (BLM) Districts, respectively, which manage public lands in central-northeast Oregon (Figures 1-1, 1-2 and 1-3). This EIS also includes plan maintenance for the Baker Resource Management Plan to create a 3-zone land tenure adjustment strategy.

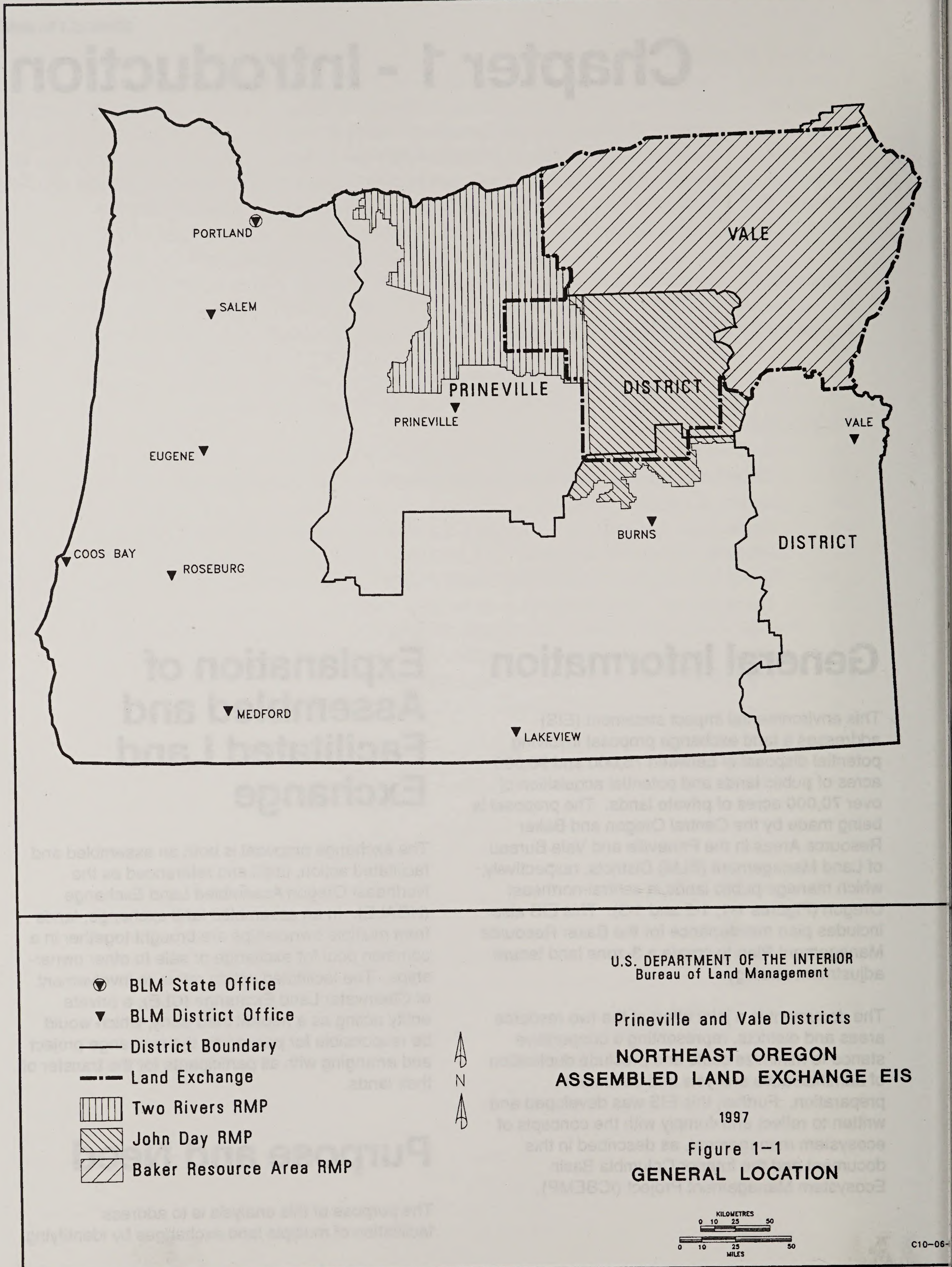
The document is a joint effort of the two resource areas and districts, representing a cooperative stance to minimize costs and preclude duplication of administrative analysis and document preparation. Further, this EIS was developed and written to reflect and comply with the concepts of ecosystem management, as described in this document and the Interior Columbia Basin Ecosystem Management Project (ICBEMP).

Explanation of Assembled and Facilitated Land Exchange

The exchange proposal is both an assembled and facilitated action, titled and referenced as the Northeast Oregon Assembled Land Exchange (NOALE). In an assembled land exchange, lands from multiple ownerships are brought together in a common pool for exchange or sale to other ownerships. The facilitated action refers to involvement of Clearwater Land Exchange (CLE), a private entity acting as a neutral third party, which would be responsible for packaging the exchange project and arranging with all participants for the transfer of their lands.

Purpose and Need

The purpose of this analysis is to address facilitation of multiple land exchanges by identifying



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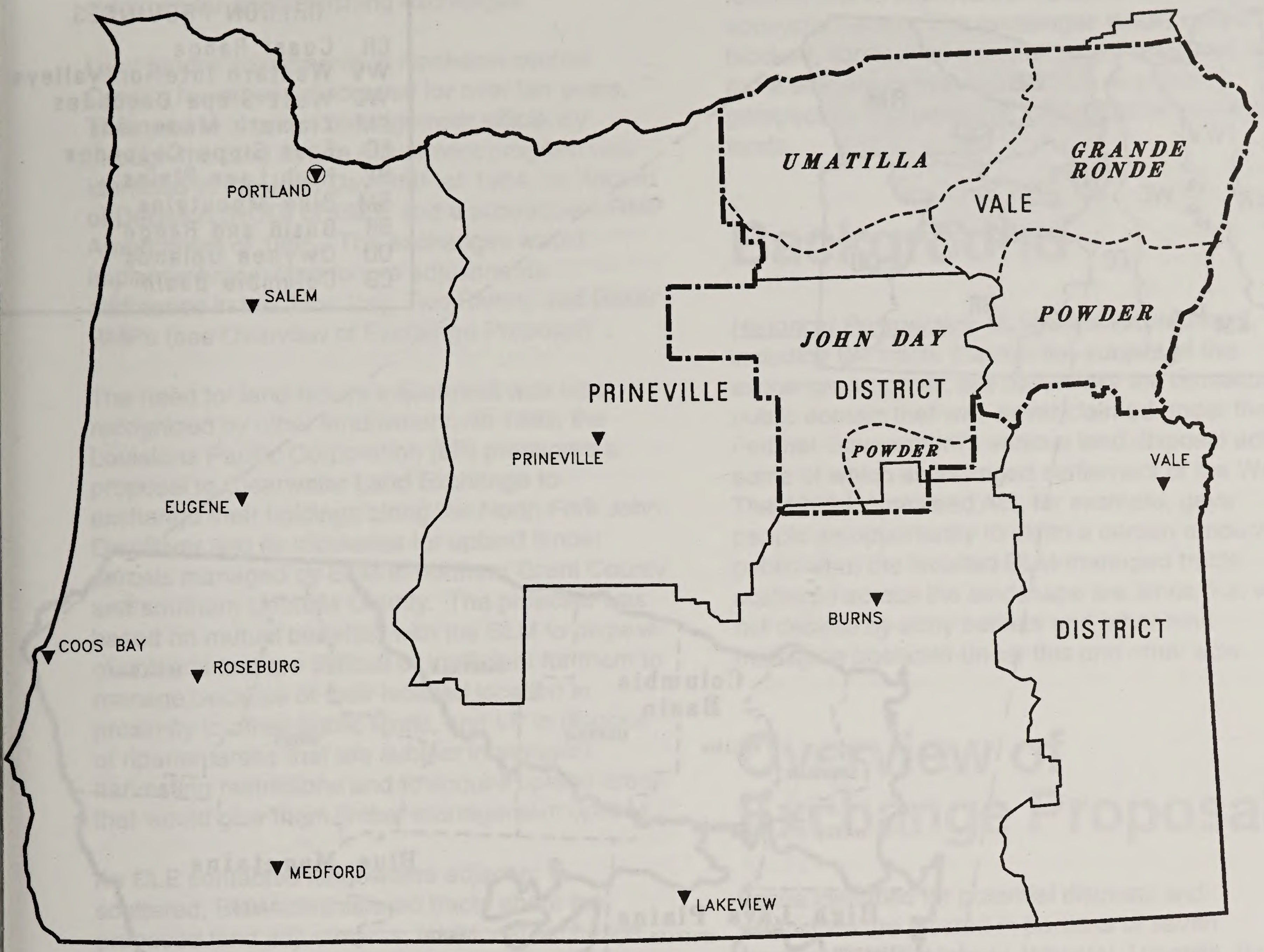
NORTHEAST OREGON
ASSEMBLED LAND EXCHANGE EIS

1997

Figure 1-1
GENERAL LOCATION



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NORTHEAST OREGON ASSEMBLED LAND EXCHANGE EIS

1997

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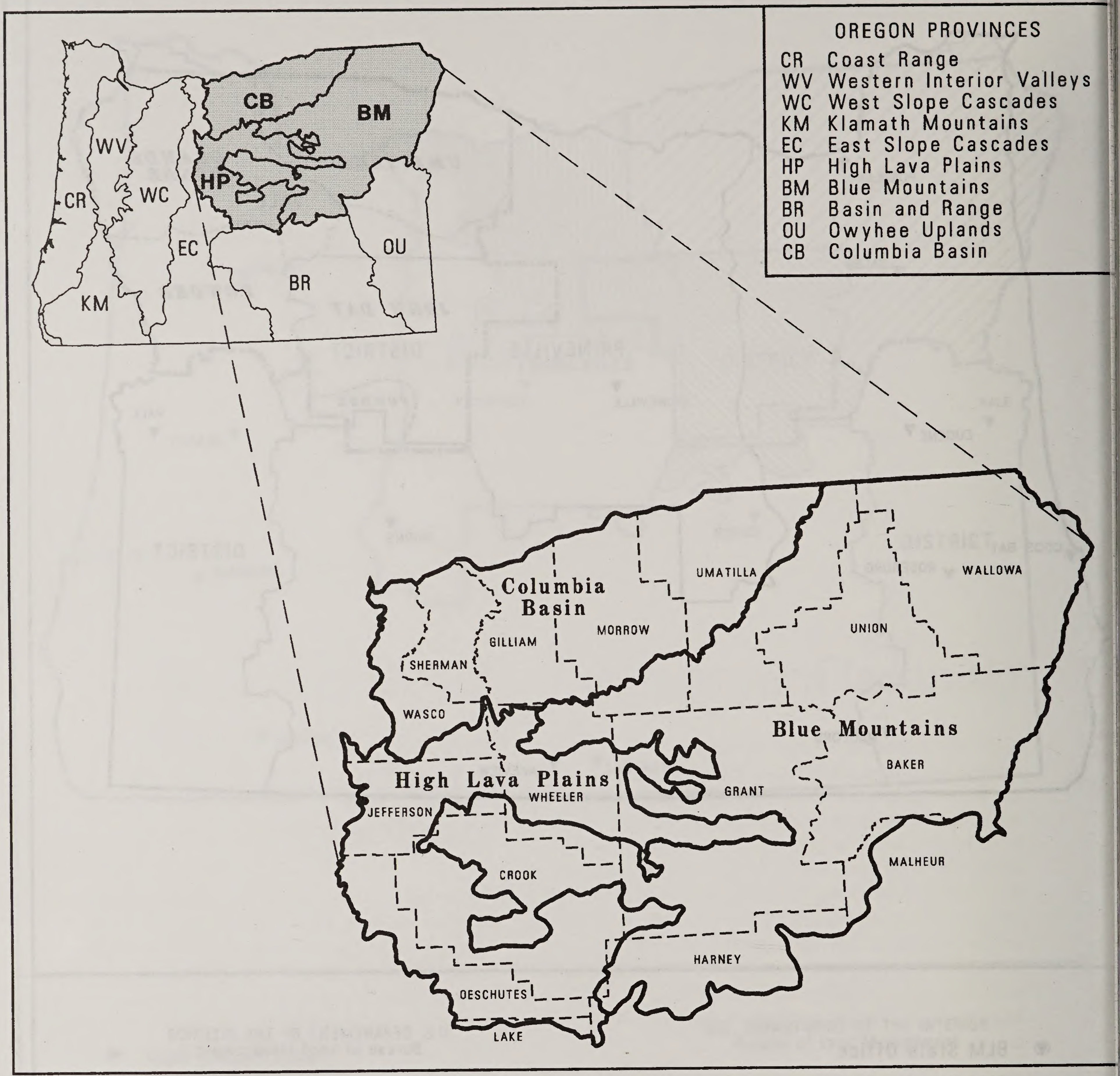

Figure 1-3. Physiographic Provinces (Ecoregions) of Northeast Oregon

Source: Oregon Natural Heritage Program: State of Oregon Ecoregion Map 1996 a pool of public lands for potential disposal, although not all-inclusive, and by providing guidance for accomplishing exchanges.

Land tenure adjustments in northeast central Oregon have been discussed for over ten years. The need to improve management efficiency through the land tenure adjustment program was identified in the John Day RMP of 1984, its Record of Decision (ROD) of 1985, and a subsequent RMP Amendment of 1995. The exchanges would implement most land tenure adjustments addressed in the John Day, Two Rivers, and Baker RMPs (see Overview of Exchange Proposal).

The need for land tenure adjustment was also recognized by other landowners. In 1993, the Louisiana Pacific Corporation (LP) presented a proposal to Clearwater Land Exchange to exchange their holdings along the North Fork John Day River and its tributaries for upland timber parcels managed by BLM in northern Grant County and southern Umatilla County. The proposal was based on mutual benefits, with the BLM to dispose of uplands that are difficult or inefficient for them to manage because of their isolated location in proximity to other public lands, and LP to dispose of riparian areas that are subject to stringent harvesting restrictions and to acquire upland areas that would give them timber management options.

As CLE contacted landowners adjacent to scattered, BLM-administered tracts about the proposed land adjustments, additional exchange opportunities were identified. Also, several smaller exchanges were proposed by landowners as a result of the public meetings and information dissemination about the land exchange. Many of these proposals are among those being considered.

Further, the exchanges reflect BLM's current management focus, which is to improve management efficiency and capabilities as described in the Land Manageability section which follows, and to improve the health of the land on an ecosystem scale. The exchanges would create blocked, contiguous tracts of public lands that are more efficient to manage from an ecosystem perspective and proximity to other BLM-managed lands.

Background

Historical Perspective: BLM-administered land, including the tracts that are the subject of this exchange proposal, are essentially the remaining public domain that was never claimed under the Federal Government's various land disposal acts, some of which encouraged settlement of the West. The 1862 Homestead Act, for example, gave people an opportunity to claim a certain amount of public land; the isolated BLM-managed tracts scattered across the landscape are lands that were not desired by early settlers and other land managing agencies under this and other acts.

Overview of Exchange Proposal

Lands identified for potential disposal and acquisition are located in portions of seven counties: Grant, Morrow, Wheeler, Umatilla, Baker, Union, and Wallowa (Figure 1-1). For purposes of discussion and analysis, the EIS area is grouped into four basins:

- John Day
- Umatilla
- Grande Ronde
- Powder

Ecosystem Management: The basic concept of ecosystems is that all things are connected and therefore interdependent. Ecosystems are complex, constantly evolving assemblages that should be viewed in both a spatial and temporal context, that is from the large (landscape/watershed) scale to the small (patch) scale, and from the short (10 years) to long term (11-100 years). Because of the ever changing nature of ecosystems, their management likewise is an evolving philosophy, reflecting changing societal values, scarcity of certain resources, new information, and the necessity to maintain ecosystem integrity. Therefore, consideration is given to maintaining the long-term ecosystem health while providing products and services within the capability of that ecosystem. In summary, management must be ecologically capable, socially acceptable, and economically feasible. In BLM's view, ecosystem goals and outcomes are more effectively and efficiently accomplished on consolidated land ownerships.

These geographic areas are based on watershed boundaries determined by the Oregon Water Resources Department (OWRD 1979) and, to some degree, tract configuration (Figure 1-2).

The three BLM land use plans presently in effect specific to these areas are:

Prineville District:

- John Day Resource Management Plan (RMP) of 1984, its Record of Decision dated 1985, and its Amendment in 1994.
- Two Rivers Resource Management Plan of 1986.

Vale District:

- Baker Resource Management Plan and its Record of Decision dated 1989.

Because of the size and complexity of NOALE, there would be an initial Phase I involving lands primarily in Grant, with lesser amounts in Umatilla, Morrow, and Wheeler counties. Subsequent future transactions would involve lands primarily in Baker, Union, and Grant counties, with lesser amounts in Umatilla, Morrow, Wheeler, and Wallowa counties.

Land Manageability

Many of the parcels considered for disposal are small, isolated tracts of public land with no legal public access. Approximately 80 percent are 80 acres or less in size and surrounded by private land (Appendix A, Tables A-1a and A-1b; Maps 1-4). Very few of these disposal parcels are fenced separately from adjoining private lands, which sometimes results in trespassing onto private lands to access the public lands and unauthorized uses such as grazing and trash dumping. Nearly 80 percent of the parcels lack public access, and most of the accessible parcels do not have vehicular access and must be accessed by foot. Regardless of the accessibility of these lands, the BLM is responsible for fire protection.

These factors make management difficult and inefficient, both logistically and financially. As a result, management on these parcels has been minimal. Blocking of public lands, by disposing of small isolated parcels and acquiring other lands that have important resource values in exchange, would improve the manageability of public lands, especially from an ecosystem approach. The proposed disposal would eliminate the cost of routine administration, the cost of providing fire protection, and the incidence of unauthorized uses, on these parcels.

In addition, the disposal is expected to reduce the number of grazing allotments by approximately 120, which would result in reduced administrative costs and greater management efficiencies in the grazing program.

Another manageability consideration is private land management, which is impacted by public land inholdings. For example, private landowners may want to control noxious weeds or reduce fuel loads on their forested lands. Their efforts to do so may be impacted by intermingled public lands that contain seed sources of noxious weeds or have overstocked timber stands with high fuel loads that pose fire risks to adjacent private lands. The private landowner may also incur expenses for surveys to do boundary identification.

Repositioning of scattered public land tracts into large blocks, while consolidating private lands, increases management efficiency and effectiveness for public and private land managers.

Disposing of isolated tracts would also decrease law enforcement costs for local governments, as well as the BLM. Because the isolated public tracts are often difficult to locate or have no legal public access, people frequently trespass on private property in their attempt to get to public land. Such trespasses sometimes result in complaints from landowners to law enforcement personnel and filing of trespass charges. This creates expenses and management concerns for local governments and the BLM.

In summary, most of these tracts cannot be effectively managed, yet they are the cause of many administrative problems for both private and public land managers. The cost of retaining these tracts increasingly adds to the expenses incurred by both local governments and Federal agencies. Although special situations warrant retention of some isolated and small tracts, the public values associated with many isolated tracts generally do not justify the expense of retaining them, especially when compared to the values of the land that could be acquired and the management efficiencies that can be achieved with blocking of public land. By repositioning BLM managed lands into large blocks, the BLM could more effectively and efficiently manage public lands on an ecosystem or watershed scale, using ecosystem management principles.

Criteria, Objectives, and Benefits Reviewed in Planning

The assembled land exchange proposal involved a 2-step screening process relative to the specific public lands to be disposed/exchanged and the lands identified, to date, for potential acquisition. In the first step, BLM-administered lands were screened for disposal/exchange potential. In this screening process, some public lands were dropped from the exchange proposal (see Appendix A, Table A-4). Among the lands that were dropped from consideration were lands that have high resource value such as wetlands; lands with special designations such as Areas of Critical Environmental Concern (ACECs), Wild and Scenic Rivers (WSRs), and Wilderness Study Areas (WSAs); lands within river corridors; lands with mining claims; lands that have a landfill; lands that have important wildlife/fisheries habitat; and lands that had tribal values.

In the second step of the screening process, lands in northeast and north-central Oregon were reviewed for acquisition potential using specific criteria, objectives, and expected benefits, which included the following considerations:

- Acquiring lands with key anadromous and other fishery habitat, and the uplands that influence them.
- Acquiring wetland and riparian areas.
- Acquiring lands with habitat for big game, upland game, threatened and endangered species, and other important wildlife.
- Acquiring lands with cultural/historical sites eligible for National Register of Historic Places.
- Acquiring unique lands with ecologic, geologic, scientific, or scenic values.
- Improving recreational opportunities by acquiring lands with better public access than the current fragmented land pattern.
- Acquiring additional lands and adopting protective direction along the North Fork John Day State Scenic Waterway and its tributaries.
- Acquiring lands within or adjacent to special designation areas, such as Areas of Critical Environmental Concern and Wild and Scenic Rivers.
- Increasing opportunities for ecosystem management by consolidating blocks of public lands.
- Improving the health of the land and restoring watershed resources through implementation of rangeland and forest management practices and other management strategies over larger land areas.
- Supporting stabilization of business, social, and economic conditions and/or lifestyles.
- Disposing of lands that, due to ownership pattern, are inefficient to manage and logically should be in private ownership.
- Creating more opportunities for partnerships in land management.

These criteria, objectives, and benefits support the BLM's ecosystem approach to assess its management actions on a basinwide scale, giving emphasis to managing for the whole versus managing for single pieces.

The 2-step screening process and these criteria will be used to screen future transaction proposals that may be identified as the assembled land exchange proceeds.

Conformance With Other Land Use Plans and Policies

The proposed land exchange and plan amendment involved interdisciplinary planning processes and is consistent with resource-related plans officially approved or adopted by state and local agencies and with plans, policies, and programs of Federal laws and regulations. Proposed BLM land uses are compatible with county planning guidelines, such as zoning, which are independent of ownership.

At the subject planning area level, the proposed land exchange is in conformance with planning direction in the Prineville and Vale Districts. The proposal is consistent with BLM planning directions of the two districts to retain and expand public holdings through land exchanges in areas where public ownership is the most appropriate management due to significant multiple resource values.

In addition, several other land use or resource management plans developed by the BLM and other Federal agencies, as well as some legislative acts, either relate to or govern management of the subject planning area, including the proposed exchange lands. Major acts or documents are listed below:

- Federal Land Policy and Management Act of 1976 (FLPMA)
- National Historic Preservation Act (1966, as amended).
- National Environmental Policy Act of 1969 (NEPA).
- Endangered Species Act (ESA) of 1973, as amended.
- Archaeological Resources Protection Act (1979, as amended):
- Oregon Wilderness Final Environmental Impact Statement (BLM 1989a) and Record of Decision (BLM 1991a) - Evaluated impacts of, and gave recommendations, to Congress about designation of certain wilderness areas within Oregon.
- Native American Graves Protection Act (1990), and the American Indian Religious Freedom Act (1978).
- Rangeland Reform (Draft 1994)
- Interior Columbia Basin Ecosystem Management Project (Draft 1997) - Will provide direction for regional, ecosystem-based, interagency planning.

Where appropriate, the management direction and previous decisions set forth by these other documents and the impacts outlined therein are used to tier analyses or are incorporated by reference in this exchange proposal EIS. The pertinent decisions established by these documents are not revisited in this document, but rather the documents are listed to provide readers with a broader perspective of the management considerations given to the proposal.

Relationship to Tribal Treaties

The geographic area addressed in this document encompasses some lands that were ceded to the U.S. Government by the Confederated Tribes of the Warm Springs (CTWS), the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and the Nez Perce. The Burns Paiute Tribe, although federally recognized, lacks a ratified treaty but has current and/or potential interests in protecting certain public lands within the geographic area for traditional values (see glossary).

Treaty rights of the CTWS and CTUIR provide for continuation of traditional subsistence activities within ceded land boundaries and for tribal access to usual and accustomed areas outside the ceded lands. The heritage-related interests of contemporary American Indians are known to include the protection of Indian graves and burial grounds and archaeological sites, as well as the perpetuation of traditional practices. Federal legislation and BLM national policy define the continuing responsibility of federal land-managing agencies to honor the terms of the treaties and to protect the rights and interests of Indian Nations and also the resources that provide for those rights and interests.

Requirements to notify and consult with Native Americans under specific circumstances are included in, but not limited to:

- Native American Graves Protection Act (1990)
- Archaeological Resources Protection Act (1979, as amended)
- American Indian Religious Freedom Act (1978)
- National Environmental Policy Act (1969)
- National Historic Preservation Act (1966, as amended)

Executive Order 13007 also directs bureaus and offices to consult with tribal representatives in early planning stages to identify cultural and religious values, traditional practices, and legal rights of Native American people that could be affected by BLM actions on Federal lands.

In recognition of BLM's responsibilities, a Memorandum of Understanding (MOU) has been signed between the Oregon/Washington BLM and the Confederated Tribes of the Umatilla Indian Reservation, and another MOU has been drafted between OR/WA BLM and the Confederated Tribes of the Warm Springs Indian Reservation. Both agreements address the appropriate level and timing for consultation, as well as other coordination issues between the Tribes and the BLM. A similar MOU will also be pursued with the Burns Paiute Tribe.

Public Involvement and Issue Identification

Meetings: Public meetings addressing the exchange proposal were held in Heppner, Pendleton, LaGrande, and Baker City during June 1996. A meeting was also held in John Day in August. These meetings were early in the planning process, preliminary to the BLM's decision to prepare an environmental impact statement. Prior to these meetings, CLE had contacted nearly every landowner in Grant County having property adjacent to BLM-administered tracts considered for disposal.

Public Tour: In October 1996, BLM hosted a public tour of selected disposal tracts in Umatilla and Grant counties and acquisition areas within the North Fork John Day River Corridor and uplands, including the JV Ranch.

Public Notification, Comment Period, and Additional Meetings: A 45-day comment period was initiated on December 3, 1996 with publication of the Notice of Exchange Proposal and the intent to prepare an environmental impact statement in the *Federal Register* and local newspapers within the project area. Subsequent to these notices to prepare an EIS, the BLM held additional public meetings in Baker City, Heppner, John Day, and Pendleton in December 1996 to gather further public comment.

Newsletter and Other Public Outreach: In December 1996, the BLM also circulated a newsletter describing the proposal. Public information books identifying specific resource inventory results and tract descriptions were available at public libraries and federal offices in Prineville, John Day, Baker City, Portland, Pendleton, and Heppner. In response to this newsletter and the scoping meetings, 20 comment letters were received from private individuals, and another 20 were received from organizations and governments/agencies.

In March 1997, a second newsletter notified the public of the development of a third alternative and updated the public on the EIS schedule.

Tribal Consultation: There have been several coordination and consultation meetings held with tribes in the NOALE area: Confederated Tribes of the Warm Spring Tribes, Confederated Tribes of the Umatilla Indian Reservation, the Burns Paiute, and the Nez Perce. A list of meetings held follows:

- Meetings between BLM and CTUIR representatives on August 16, 1995 (with John Day River Restoration Committee at tribe headquarters) and May 7, 1996.
- On April 11, 1997, the BLM conducted a tour of Juniper Canyon for CTUIR; and on May 9, 1997 BLM met with the CTUIR Board of Trustees.
- On May 22, 1997, BLM met with Nez Perce Tribe representatives at Lapwai, Idaho.
- On June 11, 1997, BLM met with the Culture and Heritage Committee of the CTWS; and hosted a 2-day field tour for committee members on July 15-16, 1997.
- On March 17, 1997, BLM met with the Paiute Tribe in Burns.

Federal Agencies Consulted:
U.S. Forest Service
Ochoco National Forest
Malheur National Forest
Umatilla National Forest
Wallowa-Whitman National Forest

State and Local Agencies/Governments:

- County Planning Commissions in Grant, Morrow, Wheeler, Umatilla, Union, and Baker counties.
- Oregon Department of Fish and Wildlife
- Oregon State Forestry.

The John Day-Snake River Resource Advisory Council, a citizen group chartered under the Federal Advisory Committee Act (FACA) to provide recommendations on land management to BLM and Forest Service in Northeast Oregon, has also been consulted on the exchange proposal.

Also, some of the tracts considered for disposal were addressed in the John Day RMP Land Tenure Adjustment, which involved public participation.

Issues Analyzed

The various public meetings, tribal/agency consultations, and adjacent landowner contacts identified several issues concerning the proposal. Issues that were considered appropriate in the analysis of the exchange proposal were grouped into the following six issue categories:

- *Resource Management on Tracts Considered for Disposal or Acquisition* Addressing this issue encompasses describing resource values of the lands identified for both potential disposal and acquisition, the current condition of the resources, and any likely changes in future land use expected to occur as a result of the exchanges.

  Among the resource values addressed are wildlife, fisheries, cultural, forestland, rangeland, and riparian areas/wetlands.
- *Land Manageability* (Includes public access and administrative costs of managing isolated, scattered tracts).
- *Wildlife Habitat* (Includes old-growth habitat and riparian areas/wetlands).
- *Columbia Basin Shrub-Steppe Habitat* (discussed separately due its uniqueness as an important vegetative component in the area).
- *Large Tree Component* (included in forestland discussions).
- *Socioeconomics.* The exchange of Federal lands for private lands and the disposal of Federal lands under the proposed Northeast Oregon Assembled Land Exchange has several potential economic effects. Issues and concerns identified by the Bureau of Land Management, interested private groups and individuals, and local governments include:
  - Impacts to county tax revenues.
  - Potential changes in PILT payments.
  - Employment changes caused by changing timber harvest levels.
  - Exports versus local processing of timber.
  - Possible impacts to the local livestock industry.
  - Impacts to recreation opportunities and quality.
  - Impacts to area attractiveness.
  - Impacts to satisfaction of individual user and interest groups at local, regional, and national levels.

Issues Considered but not Analyzed in Detail

Issues identified in the planning process, but not analyzed in detail, are described and addressed below.

- *Multiple Adjacent Landowners Desiring Acquisition of BLM Disposal Tracts; Adjacent Landowner Does Not Wish to Acquire BLM Disposal Tracts*
  Clearwater Land Exchange locates landowners who are willing to acquire BLM disposal tracts in exchange for their private lands. BLM does not become involved in bargaining processes, except for assuring that public lands are given their fair market value. Determining the specific exchange proponent of a BLM-administered tract will be determined by negotiations between CLE and willing landowners only. In most cases, however, the existing grazing lease holder will be given first option to acquire disposal tracts. These issues will not be considered further.
- *County Land Base*
  Every effort will be made to maintain current tax bases, especially in those counties that depend heavily on land resources for their primary tax revenues. No further analysis of this issue is necessary.
- *Water Rights and Agricultural Lands*
  Although BLM is not actively pursuing acquisition of agriculture lands with water rights, certain properties that possess water rights may be offered for exchange by willing sellers. Any such properties that would facilitate land consolidation, improve management efficiency, or bring important riparian habitats into public ownership would be considered for acquisition. Because the potential for acquiring agricultural lands with water rights is expected to be rare, this issue was not analyzed in depth.

- *Potential Direct Sale of BLM-Administered Lands*
  Public lands administered by the Prineville and Vale BLM Districts are generally not available for direct sale. This issue was considered during alternative development, but was determined to be outside the scope of this EIS and will not be analyzed any further (see Chapter 2, Alternatives Considered but Eliminated From Detailed Analysis).

- *Resource Management on Acquired Tracts*
  Some acquired lands may be adequately addressed by existing management plans. For those acquired lands that do not have appropriate management direction, management plans will be developed that set objectives and define management. All resource uses will be considered and allowed if consistent with the objectives of the land use plan.

- Purchase of Federal Timber for Export of Raw Logs; Compliance, under 43 CFR 2200.0-6(l), with export restrictions and non-substitution rules and laws on all federal timber sold in the exchange.
  An exchange does not constitute a purchase, but rather is a trade of equally valued assets. Some land exchanges may involve the disposal of public lands with timber, which after the exchange may be subject to harvest and export. Actions taken on the land after the exchange would not be within the jurisdiction of the BLM. Restrictions, if any, that could be placed on the disposal of public lands as a condition of their exchange would reduce their value and very likely reduce or nullify their exchange opportunities or result in more public lands being disposed to reach an equitable exchange.

  Another consideration relative to this issue is that the public lands identified for potential disposal do not have exceptional timber values. Further, retaining and managing these disjunct timbered parcels for timber harvest in many cases would involve first gaining and developing access. Costs to implement management could in some cases approach or exceed the timber values.

- *Appraisal Methods and Land Valuation*
  State-certified appraisers use standard appraisal practices to determine the market value of land and timber. Timberlands may be appraised by either comparison with sales of land having similar timber (the whole property comparison method), or by the separate appraisal of land and timber. For the NOALE, land values will be determined by comparing the subject parcels with similar lands sold recently in “arms length transactions” on the open market.

  Merchantable timber is appraised by either the transaction evidence method (comparison with stumpage sales) and/or the conversion return method using delivered log prices, then deducting all the various costs of logging and transportation. The appraisal of merchantable timber is done using comparisons with sales of timber or logs that are similar in all quality and cost factors.

  All appraisals are reviewed by BLM appraisers for technical and analytical adequacy before being approved for use in exchanges, which helps to ensure that all lands and timber are appraised at true market value at the time of the exchange.

  Additionally, BLM cannot acquire tracts valued in excess of their fair market value without receiving cost-share funding from private sources.

Distribution and Availability of Draft EIS for Review

Approximately 1,000 copies of this EIS and plan maintenance are being distributed as follows:
Federal Agencies

- Advisory Council on Historic Preservation
- Department of Agriculture: U.S. Forest Service, (Ochoco National Forest in Prineville, Malheur National Forest in John Day, Umatilla National Forest in Pendleton, and Wallowa-Whitman National Forest in Baker City)
- Natural Resource Conservation Service
- Department of the Interior: Bureau of Indian Affairs and the Fish and Wildlife Service
- Environmental Protection Agency

State and Local Governments

- County Planning Commissions (Grant, Morrow, Wheeler, Umatilla, Union, Baker, and Wallowa counties)
- Oregon Department of Forestry

- Oregon Department of Land Conservation and Development
- Oregon Division of State Lands
- Oregon State Historic Preservation Officer
- Oregon Department of Energy
- Oregon Department of Geology & Minerals
- Oregon State Parks
- Oregon Department of Transportation
- Department of Environmental Quality
- Governor's Office
- National Marine Fisheries Service
- Oregon Water Resources

Interest Groups/Organizations and Other Entities

Copies will be distributed to several tribal offices, Congressional staff and other individuals and interest groups or organizations who have either expressed an interest in the exchange or may be affected.

Availability of Document at Other Locations

Copies of the document will be available for review at the following locations:

- Oregon/Washington State BLM office in Portland
- BLM Offices in Baker City, Vale, Prineville, and John Day.
- Libraries in Baker City, Prineville, Vale, Heppner, and John Day

Public Participation in Analysis Process

Because people are an integral part of the ecosystem and its management, the public has a continuing opportunity to participate in these land exchange proposals and the plan amendment process. One useful way for reviewers to participate is to provide written comments. Especially helpful are comments that provide new information or address specific concerns, rather than make general statements.

Requirements for Further Environmental Analysis

Future tenure adjustments may include some lands that are within exchange areas generally, but not specifically, identified in this EIS and plan amendment, and possibly other lands located elsewhere within or near the Prineville and Vale Districts. All land ownership adjustments proposed subsequent to the first phase of the NOALE or not fully analyzed in this EIS and plan amendment would require site-specific environmental assessments tiered to this document. Such actions would also involve additional public participation with appropriate notification through the news media, letters to affected and interested parties, and opportunities to provide further input.

Chapter 2 - Description of Alternatives

Description of Alternatives Including Exchange Procedures

Development of Alternatives

Three alternatives addressing applicable issues identified in scoping were developed for management consideration: Alternative 1 (Preferred Alternative), Alternative 2 (No Action), and Alternative 3 (Retention Areas). See Table S-1 for a comparison of these alternatives.

The number of parcels in each alternative, and likewise the acreage of the parcels and the alternatives, should not be construed to be absolute. This acreage flexibility is largely due to experience with past land tenure adjustments, which have shown that additional parcels are identified as exchanges proceed. Due to this nature, any lands not identified within this EIS will be addressed in environmental assessments tiered to this EIS.

Exchange Procedures

The land exchange proposal in Alternatives 1 and 3 would be assembled and facilitated land exchanges, in which lands from multiple ownerships are assembled in a common pool for exchange to other ownerships.

The realty transaction between BLM and the facilitator would be accomplished through the use of an escrow account. The parties would place the deeds and patents of equally valued properties into escrow where the exchange would be made.

Realty transactions involving private parties would be similar, with the private party placing the deed to their property into escrow to trade with either BLM or the facilitator.

As property is exchanged between BLM and the facilitator, many of the tracts BLM trades to the facilitator would be offered to the adjoining landowner with the current grazing lease, as it is not the intent of the facilitator to retain ownership of

Table S-1. Summary Comparison of Alternatives[1]

Element	Alternative 1 (Preferred)	Alternative 2 (No Action)	Alternative 3 (Retention Areas)
Public Land Identified for Potential Disposal	50,140 acres	Subject to requests, tract-by-tract.	33,400 acres
Private Land Identified for Potential Acquisition			
Phase 1	47,400 acres	Subject to request, tract-by tract.	19,240 acres
Riparian Habitat (perennial stream/riparian acres)			
Potential Disposal	12.8 mi./51-90 acres	N/A	5.0 mi./20-35 acres
Potential Acquisition	71.5 mi./286-500 acres		18.5 mi./74-130 acres
Anadromous and Resident Trout Salmonid Habitat			
Potential Disposal	8.54 miles	N/A	3.60 miles
Potential Acquisition	59.40 miles		17.70 miles
Commercial Forestlands			
Potential Disposal	7,464 acres	N/A	1,134 acres
Potential Acquisition	10,634 acres		1,160 acres
Forestlands Containing Large Tree Component			
Potential Disposal	4,299 acres	N/A	0 acres
Potential Acquisition	4,810 acres		370 acres
Old-growth Forest Habitat			
Potential Disposal	1,128 acres	N/A	0
Potential Acquisition	600 acres		0
Columbia Basin Shrub-Steppe Habitat			
Potential Disposal	2,089 acres	N/A	0
Potential Acquisition	0 acres		0
Number of Grazing Allotment			
Potential Disposal	125 allotments	N/A	50
Potential Acquisition	5 Allotments		1
Legal Access (# of tracts/# of acres)			
Potential Disposal	90 tracts/15,190 acres		34 tracts/9,900 acres
Potential Acquisition	18 tracts/47,400 acres		1 tract/19,240 acres

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[1] Acres/miles are estimates only and may not be additive in many cases due to overlappig resource use/value. Data reflects only Phase 1 exchanges and ecquisitions, unless otherwise noted.

the tracts it acquires. These transactions would again be accomplished through the use of escrow. After negotiations between the facilitator and the adjoining private landowner have been completed, the private landowner would place funds into escrow, the facilitator would place a deed into escrow, and the transaction would be completed.

BLM-managed parcels identified, to date, for possible disposal are listed by county in Appendix A, Tables A-1a and A-1b. Final disposal determination will be contingent on completion of BLM inventories and additional public proposals. Potential acquisition lands identified to date are listed in Appendix A-2.

Resource assessments have been completed for all potential disposal parcels identified for Phase 1, but such assessments will not be complete for future transactions until after release of this EIS (Appendix A, Table A-7). However, all required resource and other inventories, reviews, and consultations would be done prior to disposal of public land parcels.

Future transactions would consist of a series of exchanges over several years. The BLM would dispose of isolated parcels of public land it manages in Union, Baker, Grant, and Wheeler counties, and parcels not disposed in Morrow and Umatilla counties in Phase I. In return, the BLM would acquire relatively large blocks of private land. Private lands yet to be specifically identified for acquisition will most likely be in Baker and Grant counties. Acquisitions could also occur in Union, Wallowa, and Umatilla counties. To be acceptable for acquisition by BLM, lands must meet certain resource criteria (see Chapter 1 discussion on Criteria, Objectives, and Benefits for Acquisition and Disposal).

Typically, future transactions would be accomplished in the following manner: the facilitator would identify a willing seller and negotiate for possible transfer to BLM. The land would be presented to BLM as a possible acquisition and BLM would conduct a preliminary review to determine acceptability of the land for public ownership. Then, a collection of public land parcels, equal in value to the private land, would be assembled to create an exchange transaction. An Environmental Assessment (EA), tiered to this EIS, would be prepared to address the specific transaction and to describe the resources on both the public and private lands and the associated impacts. The EA would be available for public review and input. Following an appropriate comment period and changes, if any, the exchange would proceed.

All land values would be determined by appraisal. All participants (exchanger, buyers, and sellers) must be willing participants. All lands offered to the BLM must be determined to be acceptable before transfer of title. All appraisals, cruises, field exams, and other procedures must be conducted to acceptable BLM standards.

As the exchanges are completed, the acquired lands would be incorporated into existing resource management plans by plan amendments, where appropriate. For acquired lands not adequately addressed in existing plans, detailed management plans would be developed. Although a key reason for BLM acquiring these tracts is their riparian/fisheries and wildlife values, the intent of management plans is to guide resource uses consistent with achieving objectives that strive for multiple use within existing laws, policies, and land use plans.

Alternative 1 (Preferred Alternative)

This alternative consists of two actions: Northeast Oregon Assembled Land Exchange and a plan maintenance for the Baker Resource Area.

Land Exchange: Alternative 1 would involve the exchange of numerous tracts of public and private lands (see Maps 1, 2, 3, and 4; and Appendix A, Tables A-1a, A-1b, and A-2). This proposal is expected to involve disposal of approximately 75,000 to 85,000 acres (approximately 780 parcels) of BLM-administered land in six counties (Grant, Morrow, Wheeler, Umatilla, Baker, and Union) (Tables A-1a and A-1b). Approximately 50,000 acres would be disposed in Phase 1, and the remaining 25,000 acres would be disposed in future transactions.

In exchange for these lands, the proposal involves acquiring acreage of equitable appraised values, primarily in three counties (Grant, Umatilla and Baker). The private lands considered for acquisition, to date, are listed in Appendix A, Tables A-2. Many of the smaller land exchange proposals that were incorporated into this larger proposal were a result of public scoping.

The preferred alternative would be accomplished in an initial phase and future transactions. In the initial phase (Phase 1), the BLM would dispose of most of the identified disposal parcels in Morrow and Umatilla counties, as well as many parcels in Grant and Wheeler counties. In exchange, the BLM would acquire the JV Ranch and private lands along the North Fork John Day River and South Fork John Day River.

Acquired lands in Phase 1 would include approximately 47,300 acres of upland and riparian habitat within the North and South Forks of the John Day River Basin. About 54 miles of anadromous fish habitat, and 6 miles of resident trout habitat in these drainages would be acquired. This would create a block of BLM-administered lands in the North Fork John Day drainage containing about 65 miles of anadromous fish habitat. In future exchanges there may be opportunities to acquire other properties in Baker, Grant, Umatilla, Union, and Wallowa counties depending on the outcome of their resource assessments and also having potential willing sellers that meet BLM acquisition criteria.

Plan Maintenance: This alternative includes maintenance of the Baker Resource Management Plan to revise its Land Tenure Management Direction. Under this alternative, three land tenure zones would be created (Map 4). Zone 1, the Retention/Acquisition zone, would contain lands with high resource values. These include the target acquisition areas, areas of critical environmental concern, wilderness study areas, and Wild and Scenic River corridors. It is intended that these lands be retained in public ownership, but they may be exchanged for lands with higher public values.

Zone 3, the Disposal zone, would consist of certain isolated tracts believed to have lower resource values; these lands are difficult and inefficient to manage. These lands could be disposed unless subsequent field inventories reveal resources that justify their retention.

Remaining lands would be placed in Zone 2, the Retention/Acquisition or Disposal zone. These lands include both isolated tracts and larger contiguous blocks. These lands may be retained, or may be exchanged or disposed.

Alternative 2 (No Action)

Land Exchange: Under Alternative 2, the assembled land exchange would not occur and current public land ownership patterns would remain unchanged, except as provided for under the existing RMPs on a request and individual tract basis (see maps in Prineville BLM District office and Baker Resource Area of Vale BLM District office).

Land exchange requests would continue to be processed by the realty programs in Prineville and Vale BLM Districts on an individual tract basis according to guidance in their current RMPs. Although future exchange transactions to consolidate BLM-administered lands and acquire important fish and wildlife habitats may continue, the exchanges would occur at a slower rate, one exchange at a time.

Plan Maintenance: No land tenure zone changes would be done under this alternative. The 2-zone management would be continued.

Alternative 3 (Retention Areas)

Land Exchange: This alternative proposes to dispose approximately 33,500 acres of BLM-administered lands in Grant, Morrow, Wheeler, and Umatilla counties in Phase 1 (Maps 5, 6, 7, and 8 and Appendix A, Table A-3). Also proposed in this alternative is acquisition of acreage worth equitable appraised values, primarily in Grant County. An undetermined amount of acres may be disposed in Future Exchanges in Baker, Umatilla, Morrow, Grant, Wheeler, and Union Counties. In all phases, approximately 500 tracts are considered for disposal.

To address public concern expressed during the scoping and public involvement process, this alternative would retain all forested BLM-managed tracts having large trees [greater than 21 inches diameter at breast height (DBH)]. Alternative 3 would also retain in public ownership any BLM-managed tracts containing Columbia Shrub-Steppe habitat.

Final implementation of Alternative 3 would result in acquisition of approximately 20,000 acres of upland and riparian habitat within the North Fork John Day River drainage on the JV Ranch, creating a 21,480-acre block of public lands bordering the Umatilla National Forest for over 8 miles. About 18 miles of anadromous fish habitat in the Wall, Cabin, and Ditch Creek drainages would transfer to public ownership.

Plan Maintenance: This alternative would include the same zone land tenure change of the Baker Resource Management Plan, from a 2-zone to a 3-zone, as described under Alternative 1.

Alternatives Considered but Eliminated From Detailed Analysis

In addition to the above three alternatives, there were two other alternatives that were considered but eliminated from detailed analysis. These alternatives and the reasons they were considered nonviable for in-depth analysis are summarized below.

Public Sale of BLM-Administered Lands That are Isolated

This alternative was rejected for several reasons:

- The BLM generally does not sell public land. Exchanges are the preferred method of disposing of scattered tracts.
- Outright sales return little value to the public, partially as a result of loss in overall net acres and uses of public lands.
- Revenue from sale proceeds go directly into the U.S. Treasury without any mandate to use those funds for public land acquisition and management.
- Preparation costs (such as surveys for cultural resources, botanical values, and wildlife habitat and threatened/endangered species) to sell low value rangelands such as many of those identified for potential disposal may equal or exceed their fair market value.

Disposal of Nearly Every Isolated or Small Tract in the Analysis Area *(Original Proposal)*

This alternative was very similar to the initial proposal by Clearwater Land Exchange and other participants in the assembled land exchange (Table S-1). Review of the existing approved RMPs and new information indicated that many parcels in the original proposal, totaling 6,560 acres (highlighted in red on sheet Map 1 and listed in Appendix A, Table A-4), have documented resource values of high concern to the BLM and the public and should be retained in public ownership at this time. This resource information was used to substantially modify the original assembled exchange proposal to bring the land exchange proposals (Alternatives 1 and 3) into conformance with the RMPs. Detailed analysis of the original proposal was not conducted because BLM recognized the proposal as unacceptable during the preliminary planning process.

Among the various resource-related reasons for dropping tracts from disposal consideration were:

- Wildlife Habitat, including Special Status Species
- Tribal concern areas
- Important access areas identified by Oregon Department of Fish and Wildlife
- Anadromous fish habitat
- Late-successional timber stands
- Proximity to wilderness, National Forest lands, and other special designated areas
- Wetland habitat
- Cultural/historical sites

Some tracts originally considered for disposal were retained after scoping and public involvement identified additional acquisition opportunities that would create blocked tracts, making them less fragmented from other public lands and more feasible to manage. Table A-4 in Appendix A provides specific reasons, by parcel, for their exclusion from further consideration.

Management Assumptions on Lands Considered for Disposal

- Most timbered disposal tracts would likely be harvested within 5-10 years after the exchange to the level allowed under the Oregon State Forest Practices Act.
- Management of rangeland tracts is not expected to change significantly in private ownership, because these isolated tracts often are only small inholdings of land within

larger areas of private land. The BLM, usually a minority landowner within a pasture or ranch systems, typically has not had major influence in management of these tracts.

- A few parcels, primarily in northern Morrow and Umatilla counties, would likely be put into agricultural production after being exchanged.
- Some parcels near Hermiston and John Day could be appropriate for housing or industrial use.

Management Direction Assumptions Common to All Alternatives

The following management directions would be implemented for all alternatives.

Management of Acquired Lands

Acquired lands will be managed for the purposes for which acquired. For example, any lands acquired within special management areas having specific Congressional mandates (such as Wild and Scenic Rivers and Wilderness Areas) will be managed in conformance with established guidelines for those areas. Any unique or fragile resource values on acquired lands will be protected and managed on an interim basis until completion of the next RMP amendment or revision. In some cases, local multi-resource activity plans could be initiated to determine the best interim strategy.

Soils and Water

The project-level inventory, evaluation, and planning for soil, water and air resources on public lands will continue. Soils will be managed to maintain productivity and to minimize erosion. Corrective actions will be taken, where practicable, to reduce accelerated erosion.

Water resource plans, necessary to meet program objectives, will be developed and filed in accordance with applicable State and Federal laws and regulations. Water quality of perennial streams will continue to be monitored, and climatological data will continue to be gathered.

Air Quality

Air quality will be considered in all surface-disturbing activities or other actions that could potentially affect air resources and regional visibility standards.

Wilderness and Wilderness Study Areas

Any future designated wilderness in the analysis area will be managed under guidelines of the BLM's *Wilderness Management Policy*.

Wilderness study areas in the EIS area will continue to be managed under guidance of the BLM's *Interim Management Policy for Lands Under Wilderness Review* until released by specific Congressional action through designation on non-designation.

Cultural and Paleontological Resources

Reasonable effort will be made to identify, record, and evaluate all cultural and paleontological resources, including traditional cultural properties (see glossary). Specifically, before being implemented, all proposed undertakings would require an inventory and/or assessment of related impacts upon cultural and paleontological resources in accordance with applicable laws, including:

- Section 106 of the National Historic Preservation Act 1966 as amended
- National Environmental Policy Act of 1969 (NEPA).
- Federal Land Policy and Management Act of 1979 (FLPMA).
- Archaeological Resources Protection Act of 1979, as amended (ARPA).
- American Indian Religious Freedom Act (1978).
- Native American Graves Protection Act (1990)
- Executive Order 11593 (1971).

Other guidance specific to paleontological resources includes BLM Washington Office Instruction Memorandum Nos. 94-118, 85-68, and 79-111, and Oregon/Washington BLM Management of Vertebrate Paleontological Resources (1995).

Consultation with the State Historic Preservation Office and affected Tribes would also be required. Cooperative efforts with other entities to manage selected cultural and paleontological resources would be encouraged, as appropriate. If ongoing consultation identifies any traditional cultural properties as eligible for the National Register, and continued use by the community cannot be ensured under transfer to private ownership, the lands having the cultural values would be excluded from the proposed exchange.

Sites or properties determined to be significant or potentially significant based on criteria set forth in 36 CFR 60.4, as well as criteria established specifically for this project, would be withdrawn from the proposed exchange and retained in public ownership. In these cases, primarily for the ease of management, a surrounding block of no less than 40 acres would be defined for retention.

Paleontological Resources: Localities of vertebrate, botanical, and possibly invertebrate fossils discovered as a result of inventory of proposed exchange parcels will be evaluated for significance by a professional paleontologist in consultation with the BLM. Recommendations for the disposition of any locality considered scientifically important will be developed jointly by the BLM and the paleontologist. Localities found to be significant would ordinarily be dropped from the exchange, unless the formation or suite of fossils is adequately represented elsewhere on public lands or could be made available for continued scientific study through property owner agreements. Parcels with localities determined to not be significant would be offered for exchange.

Utility Corridors, Local Linear and Areal Rights-of-Way, and Withdrawals

Applicants for utility actions will continue to be encouraged to locate new facilities within existing designated corridors, to the extent feasible. Whenever feasible, siting of any new rights-of way will be avoided in the following situations:

- Across designated wild and scenic rivers, designated Wilderness Areas and ACECs, or acquired lands adjacent to an ACEC or WSA.
- In bighorn sheep habitat in the vicinity of Aldrich Mountain.
- In the Murderers Creek Cooperative Wildlife Management Area.
- In any other locations containing sensitive resources, as identified in the existing RMPs.

Proposed corridors and applications for local rights-of-way and use of the public lands through land use permits, leases, and cooperative agreements will continue to be considered individually and be subject to appropriate analysis under the National Environmental Policy Act. Any recommendations and approved actions will be consistent with the RMP objectives.

The lands and minerals withdrawal review program will continue under all alternatives to ensure that such withdrawals are still needed and are consistent with present management direction. Where a review shows existing withdrawals are no longer needed, their revocation will be consistent with the applicable RMPs. Although no additional BLM withdrawals are proposed under any alternatives, any inholdings acquired in WSAs will be subject to stringent management guidelines of WSAs.

Leasable Energy and Mineral Resources

All acquired lands will be open to energy and mineral leasing, subject to standard stipulations, unless adjacent or comparable BLM-managed lands with similar resource values are subject to lease with seasonal or “No Surface Occupancy” stipulations. Qualified applicants for leasable energy and mineral resources will continue to be issued energy and mineral leases with standard and protective stipulations.

Seasonal stipulations may include measures to protect highly erosive soil areas or the habitat needs of special status species such as bald eagles and bighorn sheep. The No Surface Occupancy stipulation will generally be used in conjunction with Wilderness Study Areas, Wild and Scenic Rivers, and Areas of Critical Environmental Concern.

Salable Minerals

Mineral production will be authorized consistent with demand and protection of other resource values. Mineral sales and free use permits will be authorized to qualified applicants, following appropriate analyses, for removal of common varieties of sand, gravel, stone, and cinders from existing pits and other quarry sites. New community pits will be authorized following appropriate analyses and developed in response to demand, contingent upon their compatibility with protection of other resource values.

Fire Management

The Baker and Central Oregon Resource Areas will continue wildfire suppression activities in the EIS area, including any lands acquired. Fire management will be subject to BLM land use amendments, if any, identified by the Interior Columbia Basin Ecosystem Management Project; such amendments may allow for more aggressive use of prescribed fire to meet forest, woodland, and rangeland resource objectives and to promote ecosystem health while protecting human health and safety and private land investments. Prescribed fire planning will be coordinated with the Oregon Department of Forestry, adjacent landowners, and interested Indian tribal leaders.

Mining Administration Under the 1872 Mining Law

Areas not specifically withdrawn from mineral entry (such as Congressionally designated wilderness areas and wild/scenic rivers) will continue to be managed according to the 43 Code of Federal Regulations (CFR) Section 3809 and the mining laws to help meet demand for minerals, yet preventing unnecessary or undue degradation of other resource values. In areas of wilderness review, activities will continue to be managed under the 43 CFR 3802 regulations to protect their wilderness character until a Congressional decision is reached on the wilderness designation issue.

Special Status Species

Consultation will be done pursuant to Section 7 of the 1973 Endangered Species Act, as amended, for any land exchanges that may affect Endangered and Threatened (listed) species or designated critical habitat of such species. For this EIS, such consultation will be done with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, either or both, as appropriate for the species and/or action. Interagency cooperation will be subject to procedural requirements provided in the Federal Register of June 30, 1986 (50 CFR Part 402).

Further, any acquired lands that have habitat for special status species may be subject to additional land use amendments identified by the Interior Columbia Basin Ecosystem Management Project. Such forthcoming amendments may place additional emphasis on special habitat areas and management strategies for regionally sensitive plant, fish, and animal species contingent upon meeting other resource objectives and promoting ecosystem health.

Cadastral Survey, Engineering, Road and Facilities Maintenance

Cadastral surveying and engineering activities will continue to be conducted in support of resource management programs. The road maintenance program will continue and be applicable to any acquired road segments or systems. Cadastral, engineering, and road/facilities maintenance will also be subject to any BLM land use amendments identified by the Interior Columbia Basin Ecosystem Management Project, which is expected to allow for more active consideration of road management in watersheds or landscapes that have excessive road system density, while still meeting other resource objectives, promoting ecosystem health, protecting human health and safety, and providing access to private lands.

Noxious Weeds

Noxious weed control methods in both the acquired and retained lands will be conducted in conformance with BLM's Northwest Area Noxious Weed Control Program EIS of 1985 (as supplemented in 1987), its Records of Decision; and the Districts' Integrated Weed Management EA. These control measures will use an integrated approach involving preventive practices, biological control, mechanical (prescribed fire, seeding), manual removal, and chemical control. BLM will continue to cooperate with County and State agencies within the project area that have active weed control programs.

The management of noxious weeds on lands acquired in this exchange proposal will also be subject to any additional weed or non-native plant control emphasis identified by the Columbia Basin Ecosystem Management Project . This emphasis will likely be through planting and seeding of native species; proper livestock grazing management; and coordination with adjacent private agriculture interests to ensure resource objectives, while promoting healthy ecosystems.

Grasshopper and Predator Control

As a means of controlling outbreaks of grasshoppers on public lands in the planning area, the BLM will continue to cooperate with the Animal Plant Health Inspection Service (APHIS) of the Department of Agriculture. Site-specific analyses will continue to be prepared, when needed, to identify and evaluate impacts not adequately considered in broader environmental documents. Such cooperation will also extend, where applicable, to any future proposed APHIS predator control programs.

Forestlands and Woodlands

Forestlands that are acquired will be subject to meeting criteria for restoration and other conditions, as stated in the Oregon Forest Practices Act. Further, an estimated 15 to 25 percent of any acquired forestlands will be reserved from timber harvest to protect riparian/fish habitat areas and wildlife corridors.

Management of commercial forest products will continue in accordance with applicable RMPs, with sustainable harvest levels adjusted when forest inventories indicate a change in annual productivity. Timber harvest will be excluded from retained and acquired lands that are economically non-operable and on lands legislatively or administratively excluded from harvest, such as wilderness study areas and areas of critical environmental concern. These excluded areas will continue to contribute to the old-growth habitat component. Where applicable, the management intensity for timber production will continue to be adjusted to accommodate other important resource values. Harvests will continue to be restricted to emphasize important values for fish, wildlife, watershed, riparian, and recreational resources. Forest management practices described in the RMPs will be practiced on the remaining lands in the commercial forestland base.

In a similar manner, commercial woodlands will be managed to provide for harvest of posts, poles, and other products including fuelwood and boughs. Activities will continue to be subject to appropriate analyses and concentrated in areas where cutting would benefit other resources. Harvest of products from other woodlands will be excluded to protect sensitive areas, as identified by the applicable RMPs and through consultation with applicable State and tribal leaders.

Forestland and woodland management on any acquired lands in this exchange will also be subject to any BLM land use amendments identified by the Interior Columbia Basin Ecosystem Management Project, which is expected to provide for further emphasis on restoration of healthy forests and woodlands and the appropriate use of prescribed fire, while still meeting other resource objectives and maintaining access to needed natural resources.

Riparian Area Management

Management actions within both retained and acquired riparian areas will include measures to protect or restore natural functioning condition in accordance with Executive Orders 11988 and 11990 and the Oregon Washington Riparian Enhancement Plan (1987). The BLM's statewide riparian enhancement plan will provide overall guidance and direction for riparian area management. The general goal will be to maintain, restore, or improve riparian areas to achieve a healthy and productive ecological condition for maximum long-term multiple-use benefits and values.

Riparian area management will also be subject to any BLM land use amendments identified by the Interior Columbia Basin Ecosystem Management Project relative to further emphasis of riparian areas while still meeting other resource objectives and promoting ecosystem health.

Livestock Grazing Management and Rangeland Improvements

Livestock grazing for both retained and acquired lands will be managed according to existing management direction from the applicable RMPs and allotment management plans or multi-program activity plans and analyses, as amended to comply with new rangeland standards and guidelines. Livestock grazing and approved rangeland improvements will continue to be authorized, subject to monitoring, evaluation, and revised direction or policies. All grazable lands not currently authorized for grazing will be considered for authorization upon receipt of an application. Under all alternatives, livestock grazing will be monitored, and if livestock grazing results in significant resource damage, corrective actions will be implemented to protect other resource values.

On both retained and acquired lands, rangeland users will be allowed to develop rangeland improvements subject to their consistency with BLM objectives, environmental analysis, and approval by the BLM. Relict vegetation areas will be protected to preserve these areas, with each site subject to site-specific management prescriptions. Livestock grazing will be restricted or precluded following vegetation manipulation to provide sufficient time for restoration of plant community health and vigor.

Hazardous Materials

All public lands subject to disposal will be surveyed for the presence of hazardous substances or materials. The BLM will disclose facts about any sites having known hazardous substances or materials and also address related concerns.

Relative to acquisition, the policy is not to acquire any lands associated with hazardous substances or materials. Prior to accepting lands, BLM is required to conduct Environmental Site Assessments for the purpose of determining the risks and likelihood of hazardous substances being present on all proposed land acquisitions. BLM is required by policy to do at least a level 1 survey. However, the Department of Interior has adopted as current policy (602 DM 2, release # 3047, dated Sept. 29, 1995) the American Society for Testing and Materials (ASTM) latest standard practices for Environmental Assessments.

The Prineville and Vale BLM Districts have adopted the current Environmental Site Assessments: Phase 1 Environmental Site Assessment Process (E 1527-94) and/or Environmental Site Assessments: Transaction Screen Process (E-1528) as the latest versions and will use these standard practices to determine the presence likelihood of hazardous substances on all proposed acquisitions of real property (lands). If initial investigation finds a need for additional inquiry to confirm contamination or to determine the extent of contamination, the proponent will be responsible for performing such investigation to BLM standards (which are the most current ASTM standard practices for Environmental Site Assessments).

If any BLM-managed sites being disposed have known hazardous substances or materials, the BLM must disclose such facts and address related concerns

In addition, special requirements must be met if land being disposed either is, or has been, a landfill (W.O. IM 93-169).

Critical Resource Elements or Programs Not Expected to be Adversely Affected

The critical resource elements or programs listed below are not expected to be adversely affected by any of the alternatives:

- Wild horses and burros
- Areas of Critical Environmental Concern
- Wilderness and Wilderness Study Areas
- Potential Wild and Scenic Rivers
- Other Federally managed lands
- Soil and water
- Mining administration under 1872 Mining Law
- Salable minerals
- Leasable energy and mineral resources
- Utility corridors, local linear and areal rights-of-way, and withdrawals
- Fire management
- Cultural and paleontological resources
- Cadastral survey, engineering, and road and facilities maintenance
- Floodplains
- Known minority and low-income groups of people

The determination of no adverse effect took into consideration the affected environment described in Chapter 3 and assumed implementation of management actions common to all alternatives. These elements/programs are discussed in Chapter 4 to the extent the proposed exchange would have beneficial impacts. Specific information relative to some of these elements is provided in the following text.

Wild Horses and Burros. Potential land tenure adjustments under all alternatives would have no effect on the herd area, herd size, competitive forage availability, or other management directions specific to the 14,300-acre Murderers Creek Wild Horse herd area on the South Fork of the John Day River in Grant County.

Potential Wild and Scenic Rivers. Review of existing inventories shows no official inventoried or mandatory "study" rivers that would be adversely affected by any of the alternatives. There are relatively few perennial rivers or streams in the parcels proposed for disposal, and the lack of substantial federal control effectively precludes any viable management opportunities.

Other Federally Managed Lands. No probable effect on other federally managed lands is expected from exchanging the one potential disposal parcel that is adjacent to the Cold Spring National Wildlife Refuge (NWR), nor the five parcels located adjacent to lands managed by the Army Corps of Engineers (ACOE).

None of the parcels in the current land tenure proposals are located immediately adjacent any Department of the Interior National Parks/ Monuments or Game Ranges. The John Day Fossil Beds National Monument is located within portions of Grant and Wheeler counties in the Central Oregon Resource Area of the Prineville BLM District, but is at least 5 miles away from any of the lands considered for disposal.

Coordination and consultation has occurred with the staff of the Ochoco, Malheur, Umatilla and Wallowa-Whitman National Forests, which manage a substantial intermingling of National Forest lands within the subject EIS area. These staff have not identified problems with the proposed exchanges, nor have they expressed interest in acquiring any of the subject parcels through land withdrawals.

Soil, Water and Air Quality Management. Air quality is not expected to be adversely affected in the John Day, Powder, and Grande Ronde analysis areas. Some impairment of air quality may occur in the Umatilla Basin as a result of dust from agricultural activities on leased agricultural lands, but the impacts would be limited to short periods of time, dry periods of the year, and times of the specific activity.

Salable Minerals. Demand for salable mineral materials, primarily crushed aggregate, is projected to increase slightly. The most likely increase would occur along the major highway systems and near smaller communities. No community pits or State or Federal Highway use sites are proposed for disposal or acquisition.

Leasable Energy and Mineral Resources. There are no current leases for energy or mineral resources on the BLM-managed lands proposed for disposal in Phase 1 of either Alternative 1 or 3, nor are any such leases known on the lands expected to be acquired.

Also, although exploration and development for oil and gas, geothermal energy, and various solid minerals is possible, recent activity has been minimal.

Utility Corridors, Local Linear and Areal Rights-of-Way, and Withdrawals. No existing designated regional utility corridors or facilities would be affected by any alternative. Although some BLM parcels within regional corridors would be transferred into private ownership under Alternatives 1 and 3, such transfers would not preclude construction of additional facilities within these corridors.

Floodplains. No significant floodplains or floodplain functions, as defined by Executive Order 11988, would be adversely affected under any alternative. Water resources on public lands considered for disposal are short segments of small perennial or intermittent streams with little or no flat or lowland areas subject to flooding. Major streamside construction is highly unlikely following transfer into private ownership.

Hazardous Materials: There are no known sites of hazardous substances or material contamination resulting from use, storage, or illegal dumping of such materials on selected (disposal) lands. Although a few parcels near Hermiston have had some occurrences of illegal and unauthorized dumping over the years, these dump sites appear to be domestic household type garbage, which is likely not hazardous. Conducting hazardous material surveys prior to exchanging lands would identify occurrences, if any, and assist with their resolution.

Minority or Low-Income Groups of People: Known information indicates that, because of the isolated nature of the public lands being considered for disposal, they are not actively used by minority and low-income groups of people. Therefore, no disproportionately high and adverse environmental impacts to these groups of people would occur with implementation of any of the alternatives.

Sutton Mountain/Bridge Creek Land Exchange

The 50,000 acres of BLM-managed land in the Sutton Mountain/Bridge Creek drainage have the distinction of being the largest block of public land in the north half of the Prineville BLM District. This land exchange was similar to the ones proposed in the Northeast Oregon Assembled Land Exchange. This large block of land was acquired in exchange for several small tracts of public land, many of which were isolated and scattered over the district, which made their management difficult.

The Bridge Creek Land Exchange started with one man's idea. That man was Bill Smith, a local landowner, who thought the painted hills down Bridge Creek Road between Bridge Creek and Twickenham were special. So special that he thought they should be in public ownership for the enjoyment of all—for all of us, our children, and our grandchildren. Bill contacted the BLM's Prineville District about his idea.

It took more than five years to complete the land exchange. The original exchange idea involved only 1,000 acres. However, by the time the exchange was completed, over 50,000 acres of private land in the Bridge Creek drainage was brought into public domain. It all started with one landowner's idea, which led to a field trip by two managers in the Prineville BLM District, and the willing cooperation of other landowners in the area.

In the exchange, the BLM disposed of nearly 10,000 acres of public land in central Oregon. The land was in 77 generally scattered and isolated tracts, 67 of which had no legal public access. Although the disposal lands had some public values, many more resource values—including many of national and international significance—were brought into public ownership.

Much of the acquired area in the Sutton Mountain/Bridge Creek area is important winter range for deer. The acquired area is also important from a fisheries perspective, with approximately 23 miles of riparian and anadromous fish habitat. In the decade since acquisition of these lands, there is already marked improvement documented in nearly all riparian areas. One example is a significant increase in redd counts for anadromous fish, which may be attributed to changes in livestock management and project work done to improve the upland watershed and riparian areas. Many of these projects are identified in the Sutton Mountain Coordinated Resource Management Plan, a planning document that was developed after the acquisition to specifically address this area's management.

Another note about the Sutton Mountain/Bridge Creek Exchange Area is that most of the watershed and riparian projects have been completed by volunteers. These volunteer efforts represent community support of acquiring this block of land.

Chapter 3 - Affected Environment

Introduction

This chapter is separated into four sections: John Day River, Umatilla, Grande Ronde, and the Powder. Each basin is described in similar order, with the general basin resources presented first, followed by the potential acquisition lands, and then the potential disposal lands, for both Phase 1 and future exchange lands identified to date.

Because the land proposed for exchange and acquisition is scattered over a large area, particularly in the John Day River Basin, and also because not all exchange/acquisition areas are identified, the levels of discussion vary. To avoid text duplication, resource values that are generally common across the EIS area are identified and discussed prior to the individual basin descriptions.

A list of the potential disposal parcels is provided onTables A-1a and A-1b in Appendix A; both tables provide identical information, but differ in their listing order of parcels. Table A-1a lists the parcels by township and range, and Table A-1b lists the parcels by parcel number. Appendix A, Table A-2 lists potential acquisition lands.

Resource assessments listing parcel-specific resource values, conditions, and uses have been prepared for some potential disposal lands (Appendix A, Table A-7).

A separate Minerals Report is being completed for the lands being considered for disposal in this exchange proposal. The report will be available prior to the final decision in the exchange.

Physiographic Provinces

The EIS analysis area encompasses portions of three major physiographic provinces: Blue Mountains, High Lava Plains and the Columbia Basin Province (Figure 1-3).

Most easterly of the three is the Blue Mountains Province. This province is named for one of the three major mountain ranges, which with intervening valleys occupy all of northeastern Oregon. It has a relatively high elevation range (2,700-10,000 feet), including a maze of mountain types ranging from rolling grass-covered hills to craggy peaks with year-round snow. Its topography is diverse, with some deep rocky-walled canyons, glacially cut gorges, dissected plateaus, mountain lakes, forests, and meadows. Three mountain ranges are within this basin: Ochoco, Blue and Wallowa.

The High Lava Plains Province extends south from the Columbia Basin, to the Basin and Range Province, and into the John Day River Valley past the town of John Day. It comprises the high desert region of central Oregon. This is basically a lava plateau with elevations ranging between 3,500 and 4,500 feet, but with scattered basalt rims and buttes rising to approximately 6,500 feet. Bisecting the plateau are numerous canyons with streams of various sizes that run in all directions.

The Columbia Basin Province lies immediately south of the Columbia River between the Cascade Range to the west and Blue Mountains to the east. It constitutes a lava plateau broken by the basalt canyons of the Deschutes, John Day, and other streams which flow into the Columbia River. In general, the relief of the province slopes northward from about 3,000 feet to 100 feet at the Dalles along the Columbia River.

Terms Used in this EIS

Definition of Large Tree: A large tree is a tree that measures at least 21 inches diameter at breast height (4.5 feet above ground on uphill side of tree).

Resources Common to NOALE Area

The following Wildlife Habitat (old-growth habitat) and Socioeconomics descriptions are common across the four-basin NOALE area.

Wildlife Habitat

Old-Growth Habitat

In this EIS, the classification of old growth in ponderosa pine and mixed conifer forests considered the guidelines of the U.S. Forest Service Region 6 *Interim Old-Growth Definitions*. Some primary characteristics of old growth identified in those guidelines were stands that:

- Usually have 8 or more large trees (greater than 21 inches DBH or greater than 150 years old) per acre.
- Contain a complement of snags.
- Have down woody material.
- Have multiple-layer tree canopy
- Show signs of decadence (such as heart rot).

In the John Day Basin, old-growth habitat was defined using existing forest inventory data. Because of the format of the data, it was necessary to define the minimum characteristics for old-growth habitat as areas having 10 or more large trees over 21 inches dbh per acre, and 40 to 69 percent canopy closure of dominant trees.

Some wildlife species known to be associated with old-growth forests on the east side of the Cascade Mountain Range include: Pygmy nuthatch, brown creeper, bald eagle, golden eagle, flammulated owl, white-headed woodpecker, pine grosbeak, gray squirrel, goshawk, pileated woodpecker, Vaux's swift, and the pine marten.

Socioeconomics

Existing Tax Structure: Assessed property values for the six counties are shown in Table SE3-1. Future exchanges will be based on exchanges of lands of equivalent fair market value. Many lands within Oregon (especially the six rural counties of Baker, Grant, Morrow, Umatilla, Union, and Wheeler, which encompass the subject exchange lands) are in a tax deferral program for farms and forestlands (Table SE3-2). On these lands, yearly taxes are based on an assessed value below the land's fair market value. However, when forestlands on these lands are harvested, a severance tax is collected by the State based on the stumpage value. This large payment is returned to local governments to compensate for the years when reduced taxes were paid (Oregon Dept. of Revenue 1996).

Future tax revenues will be greatly influenced by the passage of Ballot Measure 47 in November of 1996. The measure amended the State Constitution to limit 1997-1998 tax collections and future tax collections. The 1997-1998 taxes are limited to the lesser of the 1995-96 tax minus 10 percent, or the 1994-95 tax. Future annual property tax increases are limited to 3 percent, unless the property has a significant change in status. New construction, improvements, subdivision, and rezoning are reasons that taxes could increase more than 3 percent. Ballot Measure 47 also prohibits using new or increased

Table SE3-1. Assessed Value, Property Tax Imposed, and Tax Rate (FY 1995-96)

County	Assessed Value (thousands of $)	Tax Imposed (thousands of $)	Average Tax Rate ($ per $1,000)
Baker	699,011	8,561,061	12.25
Grant	284,088	3,651,406	12.85
Morrow	944,189	12,661,709	13.41
Umatilla	2,461,649	31,710,558	12.88
Union	916,958	11,510,869	12.55
Wheeler	69,188	634,364	9.17

Source: Oregon Department of Revenue

Table SE3-2. Acres and Assessed Value of Land in Farm and Forest Deferral by County (FY 1995-1996)

County	Farm Deferral			Forest Deferral		
	Acres	Assessed Value ($ in thousands)	Average Assessed Value/Acre	Acres	Assessed Value ($ in thousands)	Average Assessed Value/Acre
Baker	860,667	52,593	61.11	37,129	899	24.21
Grant	871,225	28,249	32.42	167,333	5,881	35.15
Morrow	990,845	69,961	70.61	50,383	483	9.59
Umatilla	1,330,046	211,257	158.83	76,791	736	9.58
Union	482,741	59,498	123.25	156,823	3,472	22.14
Wheeler	650,012	16,591	25.52	175,958	1,774	10.08

Source: Oregon Department of Revenue 1996

fees, assessments, or other charges to pay for government services and products previously funded by property taxes, unless approved by voters (State of Oregon 1996). It is anticipated that with reduced tax revenues and limits on future increases that state, county, and local governments will experience reductions in the services and products they are able to provide. Determining which services will be reduced will be a major issue during the next few years.

Payments-in-Lieu of Taxes: BLM-administered lands are exempt from all state and local property tax. However, counties do receive revenue sharing from commodity uses, as well as through a program called Payment-in-Lieu of Taxes (PILT), both of which are based on Federal lands within their boundaries (Table SE3-3).

The PILT program guarantees at least $0.75 per acre for entitlement acres within the county to compensate for the nontaxable status of Federal lands. This revenue is a direct appropriation from the Federal treasury, which is reduced to $0.10 an acre as revenue generated by commodity use on Federal lands shared with counties offsets PILT payments. Commodity payments can be derived from entitlement acres managed by any agency,

Table SE3-3. Federal Revenue Sharing for Selected Oregon Counties

County	Entitlement Acres	Prior Year Payments	PILT Payment '92	Total Revenue Sharing	Calculated Payment Per Acre
Baker	1,017,950	$1,193,553	$101,795	$1,295,348	$1.27
Grant	1,747,480	8,149,352	174,748	8,324,100	4.76
Morrow	154,311	336,960	15,431	352,391	2.28
Umatilla	416,761	906,525	41,676	948,201	2.28
Union	623,124	1,000,633	62,312	1,062,945	1.71
Wheeler	303,727	928,510	30,373	958,883	3.16

Source: Schmit and Rasker 1996

including National Park Service, U.S. Forest Service, Corps of Engineers, U.S. Fish and Wildlife Service, and BLM. Historically, in all counties of the exchange area, revenue sharing from commodity uses exceeded the guaranteed minimum amount of compensation (Oregon Dept. of Revenue 1996).

Recent legislation (P.L. 103-397) amends the original PILT payment legislation and increases the guaranteed minimum payment levels. The $0.75 payment shall increase to $1.65, and the $0.10 payment shall increase to $0.22 by the year 2000. In the next century, annual increases will be based on the consumer price index.

Existing Timber Harvest: Historically, the majority of harvest in the six-county region has been from National Forest lands, with private owners being the second largest source. The most recent trend has been a decrease in National Forest harvests, with small increases in private harvests, resulting in a large net decrease in total harvest. Timber harvest from all ownerships totaled 366,785 thousand board feet in 1995 (SE3-4).

Timber-Related Employment: In keeping with harvest trends, employment in the lumber and wood products industry declined 15.5 percent in the NOALE area between 1990-95 (State of Oregon, Oregon Employment Division, various years). Umatilla County experienced no decline, while

Table SE3-4. Timber Harvest by Ownership, Six-County Region (1990-1996)

	1990	1991	1992	1993	1994	1995
Forest Industry	148,032	142,984	159,748	183,940	169,200	191,050
Other Private	79,583	65,734	177,396	141,666	101,841	73,365
BLM	8,358	1,337	0	68	186	290
National Forest	405,010	399,818	299,415	233,452	131,088	100,466
Indian	37	0	0	0	1,072	1,487
State, Indian, & All Other	0	18	0	278	1,116	127
Total	**641,022**	**612,891**	**636,559**	**559,404**	**404,478**	**366,785**

Source: Oregon Department of Forestry, Various Years (1990-1996)

Morrow County lost 38 percent of its timber jobs. As of 1995, 4.8 percent of Oregon's lumber and wood products employment is located within the six-county region. This percentage represents a 0.5 percent increase in the five-year period since 1990, indicating that the six-county region is making a growing contribution to timber-related employment, even as the industry is in general decline (Oregon Employment Division, Various Years).

Status of the Livestock Industry: In recent years, the livestock industry in eastern Oregon has become less competitive in relation to other cattle producing regions (Table SE3-5). Factors affecting cattle production include generally decreasing prices, environmental regulation, and competitive prices for land that has alternative uses.

Recreation Opportunity and Use: Recreation by residents and visitors to the region are an important source of economic activity. Visitor spending brings new money into the local economy and generates local employment. The BLM provides for access to public lands for a variety of dispersed uses, including hunting, fishing, wildlife viewing, motorized travel, and sightseeing. Large blocks of public land are more attractive to visitors for these uses. The BLM also manages several developed sites and an interpretive facility to accommodate greater concentrations of visitors.

Several studies have suggested that recreation is a sector with great potential for growth. Primary reasons cited include an aging population with more retirees, many who are quite affluent; increasing amounts of leisure time; and the ability of people to live and work closer to popular recreation areas due to technology advances and telecommuting. Recreation has been recognized by several local governments as a growth industry and has been included as a strategic element in local economic development plans.

Description of John Day River Basin

The John Day Basin encompasses over 5 million acres of an extensive interior plateau between the Cascade Range and the Blue Mountains in northeast-central Oregon (Figure 1-2). The Columbia River marks the basin's northern boundary, the Blue Mountains border the east, the Aldrich and Strawberry Mountains are along the south side, and the Ochoco Mountains border the west (OWRD 1986). The basin includes several counties: major parts of Gilliam, Grant, and Wheeler; and portions of Crook, Harney, Jefferson, Morrow, Sherman, Umatilla, Union, and Wasco.

Portions of all three physiographic provinces in the EIS area are within the John Day Basin (see province descriptions in Chapter 3 Introduction).

More than half of the basin is privately owned, almost 40 percent is Federally managed (USFS and BLM), and approximately 1 percent is managed by the State of Oregon (Figure 3-1).

Table SE3-5. Value of Cattle and Calves Sold (Thousands of Dollars).

County	1990	1991	1992	1993	1994	1995
Baker	29,430	30,085	29,589	28,585	25,165	22,889
Grant	14,565	15,211	13,534	14,157	13,278	11,047
Morrow	31,500	18,433	12,781	11,218	15,450	13,970
Umatilla	31,675	32,809	32,129	35,216	31,046	29,904
Union	7,682	7,755	8,132	8,682	8,161	7,581
Wheeler	4,938	5,518	5,599	5,446	4,456	4,068
Total	**$119,790**	**$109,811**	**$101,764**	**$103,304**	**$97,556**	**$89,459**

Source: Oregon State University Extension Service. Various Years.

Private ownership is predominate in the lower basin, but in the upper basin coincides mostly with stream valleys. National Forests are located in the higher elevations of the upper subbasins in the Malheur, Ochoco, Umatilla, and Wallowa-Whitman National Forests. BLM-administered lands are widely scattered throughout the basin, with concentrations along the lower John Day River, the South Fork John Day River, uplands between Dayville and Kimberly, and the Sutton Mountain near Mitchell.

Geology/Water/Soils/Air

The mainstem John Day River flows 284 miles from its source at an elevation near 9,000 feet in the Strawberry Mountains, to its mouth at River Mile (RM) 218 on the Columbia River. The basin currently contains several gauging stations operated by the United States Geological Survey (USGS) and Oregon Water Resources Department (OWRD). About 60 percent of the annual basin discharge comes from the North Fork. The upper basin contributes more discharge per area than the lower basin. Stream discharge in the John Day Basin is marked by extreme variability in both timing and quantity. Basin discharge varies not only seasonally and yearly, but also exhibits broad cycles of change over the course of decades. Basin discharge is derived largely from melting snowpack. Historically, flood flows have occurred in December through February as a result of rain and snowmelt on frozen soil. Late summer streamflows mainly consist of groundwater discharge.

In 1996, all reaches of the John Day River were listed on the State of Oregon Department of Environmental Quality (DEQ) 303(d) list (water quality limited streams) as not meeting the DEQ criteria for temperature. Select reaches were also identified as not meeting state water quality criteria for constituents such as pH, dissolved oxygen, fecal coliform, and flow modification. The inclusion of these segments on the DEQ 303(d) list is not the result of worsening water conditions in the John Day Basin but instead part of DEQ's implementation of non-point pollution components of the Clean Water Act. The North Fork subbasin has the best chemical, physical, and biological water quality in the John Day Basin, and water quality is adequate for most beneficial uses. The North Fork subbasin produces over 60 percent of the average annual discharge of the John Day Basin.

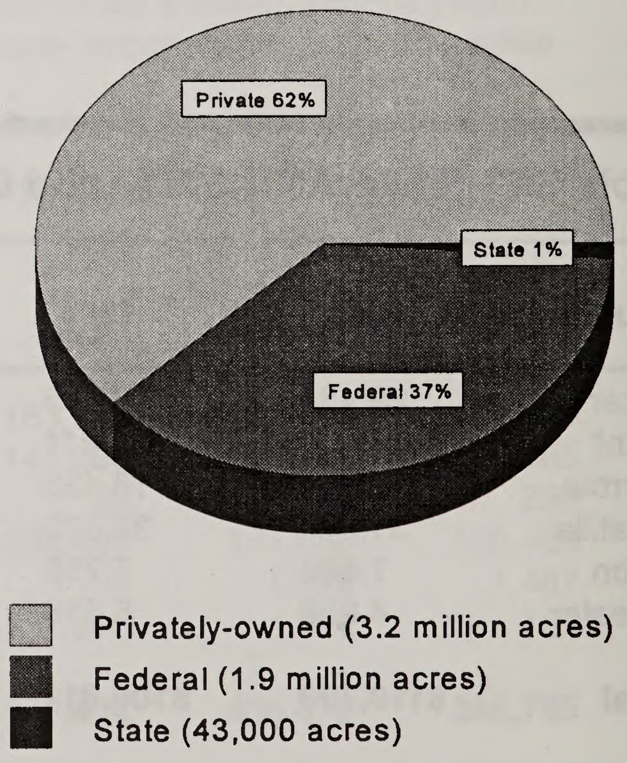
The soils identified in the John Day Basin and the locations each is characteristically found are listed below:

- Udic Cryic (High Cascades and Wallowas)
- Aquic Frigid and Cryic (basins and valleys)
- Xeric Mesic (two types: floodplains and terraces; grass-shrub uplands)
- Xeric Frigid (two types: forested mountains and plateaus; grass-shrub uplands)
- Xeric/Ardic Mesic (two types: terraces and floodplains; grass-shrub uplands)
- Ardic/Eeric Mesic (floodplains and terraces)

The climate of the John Day Basin is semi-arid, characterized by low winter and high summer temperatures, low average annual precipitation, and dry summers. Most precipitation (70%) occurs between late fall and spring, and increases with elevation. Mean annual precipitation is 9 inches at Arlington and exceeds 40 inches in the mountains.

The mineral information provided herein is for reference purposes only, pending completion of the separate Minerals Report. The basin contains a wide variety of metallic and non-metallic minerals. Metallic minerals include antimony, chromium, cobalt, copper, gold, nickel, mercury, molybdenum, silver, and tungsten. Major deposits are concentrated in the eastern parts of the basin, mainly in the upper North and Middle Forks, and

Figure 3-1. Landownership in John Day River Basin.



the upper mainstem and tributaries near John Day and Prairie City. Non-metallic minerals (including asbestos, clay, diatomite, limestone, building stone, and zeolite) are distributed throughout the basin. For most of these deposits, extraction is not economically feasible at the present time. Historically, the upper John Day subbasin had a rich and varied mining heritage, boasting production of relatively large amounts of gold and precious metals.

Vegetation

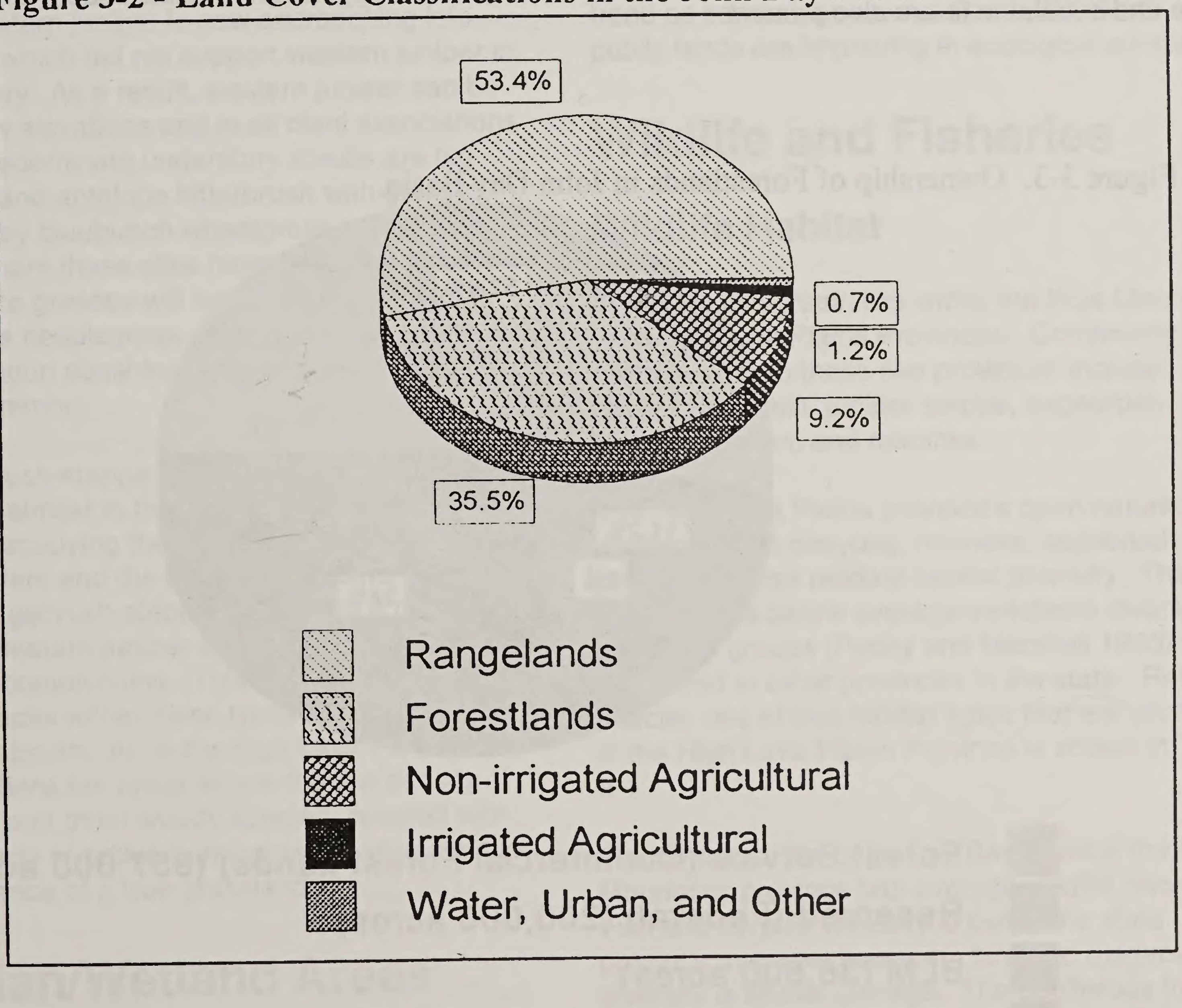
Land cover in the John Day Basin is predominantly forest and rangelands, with a small amount of agricultural land (Figure 3-2). Grass, shrub, and juniper communities dominate the valleys; ponderosa pine, lodgepole pine, Douglas fir, and white fir communities dominate higher elevations.

Much of the basin's agricultural land is on the plateaus of Gilliam and Sherman counties. Irrigation is used to a greater extent in the upper basin to grow alfalfa, meadow hay, and fruit crops.

Forestlands

The John Day Basin encompasses approximately 1.8 million acres of forested lands (Figure 3-3). About 1.6 million of these acres are classified as commercial forestlands (CFL), which are lands available and capable of producing marketable timber. These lands contain approximately 13.8 billion board feet of commercial timber. Approximately 196,700 acres are classified as commercial-reserved forestlands, which are lands capable of, but reserved from, production of marketable timber. Commercial reserved forestlands are largely located in National Forest Wilderness Areas, including the Strawberry

Figure 3-2 - Land Cover Classifications in the John Day Basin.



Source: OWRD1986

Mountain, North Fork John Day, and Black Canyon. Other commercial reserved lands are found in streamside and roadside protective zones, campgrounds, and administrative sites (OWRD 1986).

The BLM manages only a small percentage of the total commercial forestlands in the John Day Basin (Figure 3-3). Approximately 26,800 acres (73%) of the total BLM-managed CFL acreage contain trees classified as large trees.

The principal forest cover is the ponderosa pine type, constituting about 60 percent of the commercial forest acreage. Ponderosa pine typically dominates south slopes and often occurs at lower elevations, but is uncommon below 4,000 feet due to low precipitation.

Moisture conditions of higher elevations favor other species such as Douglas fir, white fir, western larch, lodgepole pine, and western white pine. Dominant species on the cool, moist upper mountain slopes, generally above 6,000 feet in elevation, are fir and lodgepole pine; Englemann spruce and subalpine fir are also present.

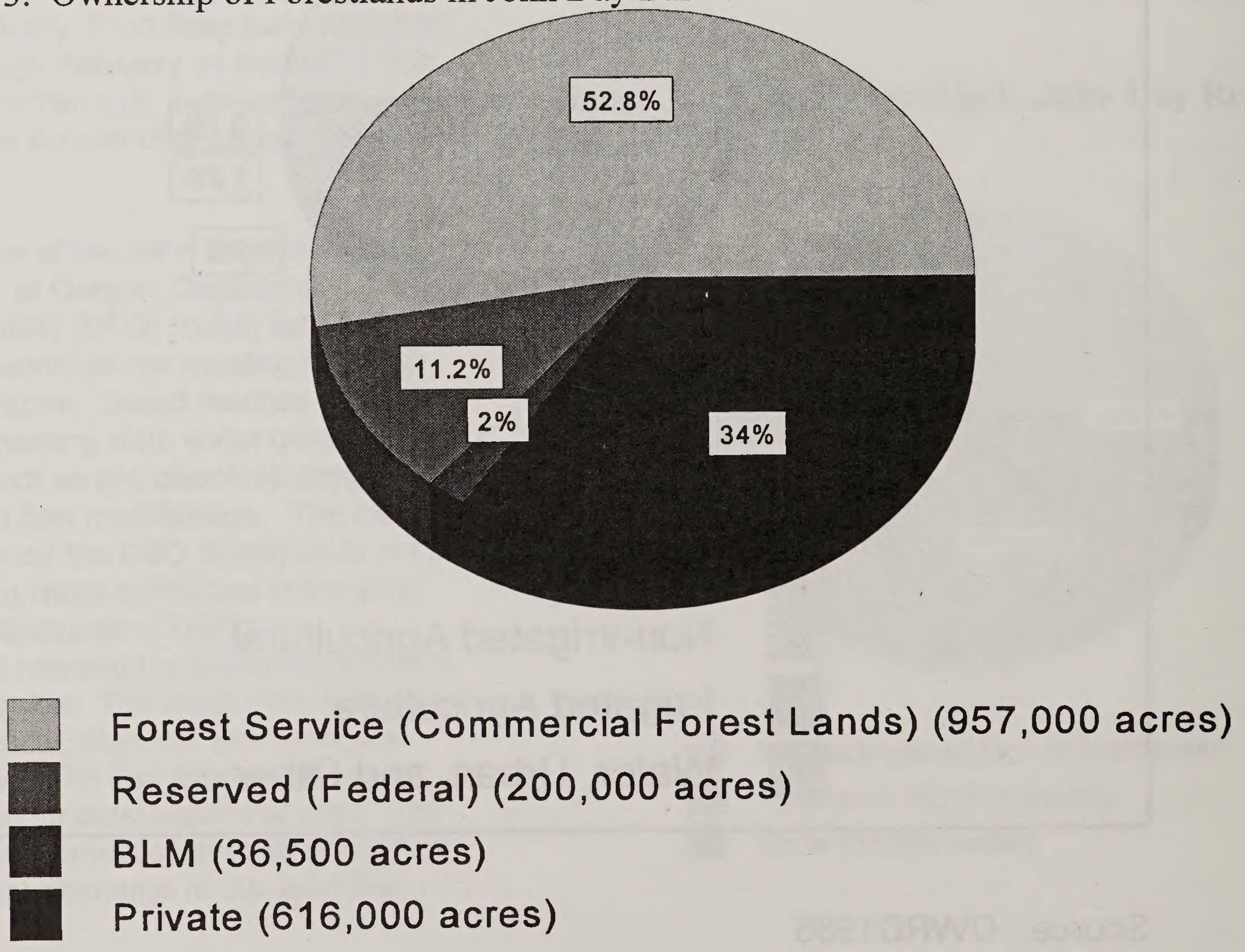
Extensive stands of lodgepole pine are found where catastrophic agents, such as fire or insects, have killed timber stands (OWRD 1986).

Rangelands

Sagebrush-steppe covers much of the Columbia Basin and High Lava Plains provinces. Various species of sagebrush (big, low, and stiff) are found in some areas, the occurrence of each dependent on the presence of soils favorable to the individual vegetative type. Each site has a specific assemblage of herbaceous vegetation. Many of the deeper soil sites, especially on flat terrain, have been converted to agricultural use, predominantly dryland wheat and other grains. Fire occurs less frequently in rangelands than in forested communities, but nevertheless has a role in the ecology of the shrub-steppe. Sagebrush is extremely fire-sensitive, and burned areas are readily converted to a seral grassland.

In areas that have steep topography or soils unsuitable for agricultural development, much of the native vegetation remains intact. On these

Figure 3-3. Ownership of Forestlands in John Day Basin.



areas, the dominant understory species are bluebunch wheatgrass and Idaho fescue. The bunchgrasses on some sites have more cover than the shrubs, creating a true grassland aspect.

On gentle slopes where agricultural development has not occurred, many of the native plant communities have been converted to sites dominated by exotic annual species such as cheatgrass, as well as big sagebrush and/or rabbitbrush. The primary change agent has been past livestock grazing practices, beginning in the mid-19th Century; other causes of change include floods, road construction, and utility development. Converted sites are especially prevalent on river terraces and on slopes adjacent to water.

Rangelands in the Blue Mountains begin with the transition zone between the coniferous forest, at higher elevations, and the shrub-steppe. Western juniper, the most xeric of trees in the Pacific Northwest, dominates this zone, with varying densities of ponderosa pine, depending on elevation and aspect. Originally restricted to the higher elevations and in areas less at-risk from wildfire, western juniper is now encroaching into many sites which did not support western juniper in recent history. As a result, western juniper can be found at low elevations and in all plant associations as well. Predominate understory shrubs are big sagebrush and antelope bitterbrush with grasses dominated by bluebunch wheatgrass and Idaho fescue. Where these sites have been disturbed, the dominate grasses will be Sandberg bluegrass or Thurber's needlegrass. Herbs such as western yarrow, Oregon sunshine, and threadleaf fleabane are also common.

The sagebrush-steppe of the Blue Mountains Province is similar to that of the High Lava Plains Province, occupying the zone between western juniper/confers and the drainage bottoms. In addition, sagebrush-steppe is found as a mosaic within the western juniper and coniferous vegetation communities. This is usually the result of shallow soils within these types supporting low or stiff sagebrush. As in the High Lava Plains Province, there are areas where the low density of sagebrush and other woody species, coupled with a high density of native bunchgrasses, give the site an appearance of a true grassland.

Riparian/Wetland Areas

Riparian areas occupy less than one percent of the land base of the three provinces. Generally, this percentage is even less on BLM-managed lands in the basin, particularly those considered for disposal.

Riparian areas are the green "stringers" of vegetation along perennial streams. The potential natural vegetation of most of these areas includes various species of hardwoods, such as alder, mountain ash, red-osier dogwood, willow and cottonwood. Due to past land management practices, many of these species have been diminished or even extirpated from some reaches of certain streams. Generally, riparian areas comprise between 4 and 7 acres per mile of stream, which is the range used in computing riparian acres for this EIS.

Single, decadent cottonwood trees along the John Day River, for example, may represent the remnant of a large cottonwood "gallery." Many of the riparian areas are now dominated with non-native species, such as Kentucky bluegrass, along with early-seral plants such as Nebraska sedge and baltic rush. An increasing emphasis on restoration of these riparian areas appears to be reversing this trend as some riparian areas on both private and public lands are improving in ecological condition.

Wildlife and Fisheries

Wildlife Habitat

The John Day Basin lies within the Blue Mountain and High Lava Plains Provinces. Community types associated with these two provinces include: coniferous forest, juniper steppe, sagebrush steppe, riparian, and marshes.

The High Lava Plains province's open nature, combined with canyons, rimrocks, sagebrush and juniper provides modest habitat diversity. This province has below average vertebrate diversity in all animal groups (Puchy and Marshall 1993) when compared to other provinces in the state. Relative species use of four habitat types that are prominent in the High Lava Plains Province is shown in Table 3-1.

The portion of the John Day Basin within the Blue Mountains province has average wildlife diversity. Fish and herptile diversity is below the state province average; however, bird and mammal diversity is above average. The coniferous forest community type adds to this diversity, as it is a major habitat component. Relative species use of

Table 3-1. Usage Levels of Selected Communities Regularly Used by Native Species of Herptiles, Birds, and Mammals by Province (John Day Basin)[1].

Species Type Using Province	Total Number of Species Using the Province	Community Type				
		Sagebrush Steppe	Coniferous Forest[2]	Juniper Steppe[3]	Riparian Area	Marshes
High Lava Plains Province:						
• Herptiles	20	65%	-	50%	35%	25%
• Birds	194	22%	-	24%	49%	45%
• Mammals	56	54%	-	46%	63%	32%
Blue Mountains Province:						
• Herptiles	17	76%	42%	-	29%	29%
• Birds	231	19%	34%	-	51%	37%
• Mammals	75	38%	62%	-	65%	32%

[1] Excludes irregular and accidental species.
[2] Not selected community type for High Lava Plains Province.
[3] Not selected community type for Blue Mountains Province.

four habitat types that are prominent in the Blue Mountains province is shown in Table 3-1.

Both the quantity and quality of wildlife habitat in the John Day Basin has been declining in recent history. Causes for the decline include certain logging practices, overgrazing, wildfire suppression, drought, recreational activities, high road densities, and noxious weed encroachment. Logging has removed critical escape cover in some areas. Grazing has resulted in reduction of riparian vegetation in many instances. Wildfire suppression has changed vegetative composition in many habitats. Increasing recreation use has resulted in disturbances, harassment, and displacement of some wildlife species.

Special Status Wildlife Species

The Special Status Species thought to occur within the John Day Basin are listed in Appendix B, Table B-3. However, there are only two documented species with Federal listing: the spotted frog and the Bald eagle. The spotted frog, a Candidate species, was recently sighted and documented in the Ukiah area (Kronner 1996, Bull 1997).

The Bald eagle (*Haliaeetus leucocephalus*), a Federally listed Threatened species, is primarily a winter inhabitant. Its main use area is the John Day River corridor. Numerous nocturnal roost areas, as well as a few known nest sites, occur in the John Day Basin, but most occur on private or other federal land. Only one roost site has been documented on potential disposal land, and this tract was removed from the disposal list to avoid any potential conflict regarding threatened and endangered species (See Appendix A, Table A-4). Three known roost areas are on private lands along the North Fork of the John Day River; these lands are identified for potential acquisition. Also, 12 roost sites are on BLM-administered lands that are in close proximity to acquisition lands on the South and North Forks of the John Day River.

The Peregrine falcon (*Falco peregrinus*), a Federally listed Endangered species, may occur as a seasonal migrant through the John Day Basin. However, no known nesting or roosting sites occur in the basin.

The list of special status species provided in Appendix B was supplied through consultation with the U.S. Fish and Wildlife Service (USFWS).

Fisheries

Approximately 1,800 miles of usable spawning habitat for steelhead trout (*Oncorhynchus mykiss*) and 117 miles for spring chinook salmon (*Oncorhynchus tshawytscha*) exist in the John Day Basin (Unterwegner 1997). This habitat supports one of the last remaining wild anadromous fish runs in the Columbia River drainage. Historically, the John Day River and its tributaries provided desirable spawning and rearing habitat for fall and spring chinook salmon, summer steelhead trout, redband trout (*Oncorhynchus mykiss* ssp.), bull trout (*Salvelinus confluentus*), and westslope cutthroat trout (*Oncorhynchus clarki lewisi*) populations. A list of native and non-native fishes inhabiting the John Day Basin is provided in a composite list for the Columbia Basin in Appendix B (Table B-2).

The basin's salmonid fish populations have experienced recent population declines. Available data indicates that over 6,000 spring chinook and 35,000 steelhead historically migrated to the John Day Basin to spawn. Since 1959 when ODFW started spawning redd counts in the basin, adult spawners returning to the basin have ranged from 370 to 5,000 spring chinook and 3,000 to 35,000 steelhead (Unterwegner 1997). Although there is a downward trend in returning steelhead adults over the four decades, spring chinook salmon returns have been showing an upward trend in the last 10 years (Unterwegner 1997). In 1996, an estimated 6,600 adult steelhead returned to the basin to spawn and, based on spawning redd counts, about 3,300 spring chinook also returned. Recent declines are generally attributed to high adult and juvenile mortality at the Columbia River dams, combined with high egg and smolt mortality in the basin as a result of habitat degradation.

The North Fork drainage is the basin's major producer of wild spring chinook and summer steelhead, at approximately 60 and 40 percent, respectively. In recent years, as many as 1,855 adult spring chinook and 8,000 adult summer steelhead have returned annually to the North Fork drainage to spawn.

The North Fork subbasin contains about 72 miles of spring chinook spawning and rearing habitat, and over 700 miles of steelhead habitat. Prime spring chinook spawning habitat occurs between Camas and Baldy Creeks, and in the Granite Creek drainage, mostly on National Forest lands. Major steelhead producing streams in the North Fork basin are Cottonwood, Rudio, Deer, Big Wall, Little Wall, Potamus, Desolation, Granite, Ditch, Mallory, Trout, Meadowbrook, Trail, Olive, Clear, Bull Run, Camas, and Beaver and Big Creeks.

The North Fork also has the best bull trout population strongholds in the basin (Unterwegner 1997). Ratliff and Howell (1992) noted this population was "of special concern," with habitat degradation and angling overharvest as the suppressing factors. In 1993, ODFW eliminated angling harvest of bull trout in the John Day River Basin. Bull trout are found year-round above Desolation Creek in the North Fork and tributaries, and its current winter distribution extends downstream to Wall Creek in the North Fork (Unterwegner 1997).

The Middle Fork subbasin produces 24 percent of the total spring chinook and 30 percent of the total summer steelhead populations in the John Day Basin. About 30 miles of spawning and rearing habitat for spring chinook are available in the Middle Fork between Armstrong and Summit Creeks. An estimated 295 miles of spawning and rearing habitat also are available in the Middle Fork and tributaries that support steelhead production. Major steelhead producing streams include Camp, Indian, Granite Boulder, Deep, Beaver, Clear, Big Boulder, Deerhorn, Vinegar, Vincent, Davis, Long, Granite, Butte, Big, Huckleberry, and Slide Creeks. The Middle Fork supports a productive resident redband trout fishery (OWRD 1986). Bull trout are thought to be extinct in the upper Middle Fork subbasin, and the two populations in Big Creek and Granite Boulder Creek are both at high risk of extinction (Ratliff and Howell 1992).

The Upper John Day subbasin produces 18 percent of the total spring chinook and 23 percent of the total summer steelhead populations in the John Day Basin. About 15 miles of spawning and rearing habitat for spring chinook are available between Dixie Creek and Roberts Creek. An estimated 480 miles of spawning and rearing habitat also are available in the subbasin and tributaries that support steelhead production. Major steelhead producing streams include Cottonwood, Canyon, Murderers, Deer, Black Canyon, Beech, Strawberry, Reynolds, Deardorff, McClellan, Fields, Belshaw, Dog, Pine, Moon, Rock, Johnson, Laycock, Grub, Indian, Bear, Dixie, Roberts, and Rail Creeks (OWRD 1986).

The subbasin supports a productive resident redband trout fishery. Bull trout populations in the upper mainstem and tributaries currently are under moderate risk of extinction according to Ratliff and Howell (1992). The current range of westslope cutthroat trout is centered in the upper reaches of this subbasin (ICBEMP 1996 and Duff 1996).

The Lower John Day River serves primarily as a migration corridor for all adult and juvenile anadromous fish using the upper mainstem drainages. Tributaries in the subbasin produce about four percent of the steelhead in the basin. Good habitat conditions for steelhead and resident trout exist in Bridge, Horseshoe, Kahler, Parrish, Rock, Alder, and Cherry Creeks. Marginal steelhead spawning/rearing habitat exists in Thirtymile, Rock, and Butte Creeks. Production here is often restricted by low flows during dry years. The Lower John Day River supports a healthy and popular smallmouth bass fishery.

Special Status Fish Species

Steelhead trout in the John Day Basin have been genetically grouped into what is named the Middle Columbia Evolutionary Significant Unit (ESU). This inland steelhead ESU encompasses the Columbia River Basin from Mosier Creek, Oregon, upstream to the Yakima River, Washington, inclusive. Steelhead of the Snake River Basin are excluded. In August of 1996, the National Marine Fisheries Service designated the Middle Columbia ESU steelhead trout as a Candidate Species. This designation does not propose the stock for listing under the Endangered Species Act (ESA), but indicates further review of the stock's population status is warranted. Because of this status, no management actions will be implemented that may contribute to the need to list this species.

In April of 1997, the U.S. Fish and Wildlife Service decided to propose listing the bull trout under the Endangered Species Act (ESA). Two populations were included in the proposal, bull trout in the Columbia River Basin, and the Klamath River Basin. On June 10, 1997 the USFWS proposed listing the Columbia River population segment as Threatened, and the Klamath River Basin population segment as Endangered. No management actions will be implemented that adversely affect or may contribute to the need to formally list this species.

The status of bull trout populations in the John Day Basin ranges from "moderate risk of extinction" in the Upper John Day, to "high risk" or "probably extinct" in the Middle Fork and tributaries, to "of special concern" in the North Fork John Day (Ratliff and Howell 1992).

Westslope cutthroat and redband trout in the John Day Basin are both BLM Sensitive species. In Oregon, Westslope cutthroat trout are found only in small headwater tributaries of the upper mainstem John Day River and the North Fork John Day River. Westslope cutthroat trout are believed to have occupied approximately 179 miles in the two drainages, but currently occupy about 73 miles (41 percent) of their historic habitat (Duff 1996). Redband trout are widely distributed east of the Cascade Mountains in Oregon, and are found in all counties within this EIS analysis area (Marshall et al. 1996)

Cultural Resources

The cultural resources on both private and public lands in the upper watershed of the John Day Basin are variably understood as there have been few formal studies in this geographic area. However, some reports from just outside this area have relevance. Most known archaeological information about the geographic area relates to compliance-based project work, which is generally unsynthesized and was conducted primarily on lands administered by the U.S. Forest Service. Other sources of information are early 20th century ethnographies. The available written record has more information on the historic occupation of the geographic area than on the prehistoric.

There are no known cultural resources within the geographic area listed on the National Register of Historic Places. However, several prehistoric sites have been recorded that are considered to be potentially significant because they may contain information important to our understanding of prehistory.

The geographical diversity of the upper John Day Basin has, over the years, affected the availability of plant and animal resources. Those resource availabilities in turn affected the subsistence and settlement patterns expressed by prehistoric human populations occupying the area at any given time. Generally, however, the annual round of exploitation of the peoples using the geographic area was one of fission (family unit dispersal) and fusion (occasional multiple group unions). During the winter months, semi-permanent occupation by multiple groups took place in key lowland areas, which provided protection from the elements and were in close proximity to cached stores or stable food sources, water, and fuel. These sites will be represented by large, but fewer, multiple occupation sites that exhibit lithics and features.

Depending on weather and resource availability, some temporary special-use sites located away from the main camps were likely used, particularly for hunting. Special use sites are represented by small lithic scatters. Through the spring, summer, and fall months people alternately separated into smaller family groups to take advantage of dispersed resources, or congregated in areas of resource abundance for root festivals, fish runs, and rabbit drives.

Group social dynamics were relatively simple in the dispersed mode. However, during aggregated settings, social relations could become quite complex and involve groups from different ethnic or linguistic divisions. This was particularly true in this geographic area, which was likely visited by groups from both the Great Basin to the south and the Plateau to the north. Indigenous groups also possibly occupied this geographic area.

Central Oregon ethnographies indicate that this geographic area was utilized variously by the Tenino and Umatilla, both Sahaptan speakers, and also the Northern Paiute who were Numic speakers. These two language groups had amicable relations, with only occasional discord, and participated together in group activities such as hunting, fishing, plant gathering, and related festivals. The Northern Paiute who occupied the area most recently were known as the "Root Eaters." Root festivals are known to have been held in upland prairie areas. The entire upper John Day watershed is considered good habitat for camas, Kous, bisquitroot, bitterroot, onion, and yampa.

The recorded history of the geographic area dates to the 1860s with gold discovery in the Canyon City area and later the North Fork John Day. The influx of miners brought merchants, loggers, and homesteaders who were needed to supply the gold camps with food, goods, and building material. Although the gold rush was short-lived, mining continues to play a small role in the area's economy. Sheep/cattle grazing and logging have been the area's main economic activities since its early settlement. Tourism and recreation are becoming more prominent activities in the area as populations from the larger urban centers search for such opportunities.

Paleontological Resources

The entire John Day Basin is considered to have significant paleontological resources, primarily because its exposures offer a continuous look at vertebrate evolution over a 20-30 million-year period.

Socioeconomics

Populated Areas: The most populated area in the John Day Basin is between Dayville and Prairie City, which is the hub of the basin's resource-based industry and economy. Over 50 percent of Grant County's population live in the towns of Mt. Vernon, John Day, Canyon City, and Prairie City. Other incorporated towns within the basin include Monument, Ukiah, Granite, Long Creek, Spray, Mitchell, Grass Valley, Fossil, Antelope, Condon, Moro, and Shaniko.

Agriculture, service industries, retail trade, and the manufacture of forest products are the primary private-sector industries in the John Day Basin. Federal, state, and local governments also are major employers. Recreation and tourism are important to the basin's economy, attracting thousands of visitors each year. An estimated 100,000 angler days were spent fishing for steelhead, trout, smallmouth bass and other species in 1987. Hunting, fishing, hiking, camping, sightseeing, biking, and boating activities are increasing in popularity throughout the John Day Basin, and their economic importance is becoming a significant complement to the agriculture, forest products, and service sectors of the John Day Basin economy (OWRD 1986).

Private Lands Considered for Acquisition in John Day River Basin

Approximately 68,700 acres of private land in the John Day River Basin have been identified for potential acquisition by BLM, to date (Table 3-2; and Appendix A, Table A-2). Private lands considered for acquisition include approximately 26,100 acres owned by Pioneer Resources along the North Fork John Day River from Camas Creek to Potamus Creek, encompassing upland and riparian habitat in the Stony, Potamus, Mallory, and Jericho drainages.

Abutting the southwest corner of the Pioneer property is the JV Ranch of approximately 19,240 acres, which is owned by two individuals. The JV Ranch includes upland and riparian habitat in the Cabin, Ditch, Wall, and Little Wall drainages. Other potential acquisition lands include 1,120 acres in the upper Little Wall Creek drainage, between the northeast corner of JV Ranch and National Forest lands. Currently, only scattered tracts of public land are located in this area. Acquiring the JV Ranch and Pioneer Resources lands would block 9,520 acres of BLM-administered lands and 960 acres of state lands, creating a 56,900-acre block of public lands bordering the Umatilla National Forest boundary for over 20 miles.

Also, an 840-acre block of land located on lower Wall Creek, near but not joining the JV Ranch, could be acquired. About 2.4 miles of Wall Creek flows through this parcel from north to south.

In the Rudio Mountain area, which straddles the North Fork and Upper John Day River drainage boundaries, potential acquisition lands in future acquisitions total almost 17,000 acres. These lands are owned by Prairie Wood Products, Longview Ranch, and one individual. Both scattered and blocked BLM-administered lands are present in this area.

Approximately 4,300 acres in the South Fork John Day River drainage are among potential acquisition lands. About 6.5 miles of anadromous and resident fish habitat on the South Fork John Day River and Indian Creek could be acquired. About 3.5 miles of river frontage within the Wild and Scenic River corridor could be acquired. BLM-administered lands are well blocked in this area; this transaction would fill some ownership gaps and increase public management of important riparian habitats.

Table 3-2. Private Lands Identified for Potential Acquisition in John Day Basin.

Location by Drainage	Approximate Acres
North Fork Camas Creek to Potamus Creek (including Stony, Potamus, Mallory & Jericho)	21,700
Cabin, Ditch, Wall, and Little Wall	19,240
Upper Little Wall Creek	1,120
Lower Wall Creek	840
North Fork of Upper John Day River	16,900
South Fork of Upper John Day River	4,300
Dixie Creek	200
Total	**64,300**

About 200 acres of forestland could be acquired in the Dixie Creek drainage, north of Prairie City. This parcel blocks into BLM and National Forest lands, and contains 0.25 miles of riparian habitat on Comer Creek.

There would also be potential for other acquisitions within areas designated for retention/acquisition as opportunities arise by using equity values generated from disposal tracts.

Resources on Potential Acquisition Lands in John Day Basin

Vegetation

Forestlands

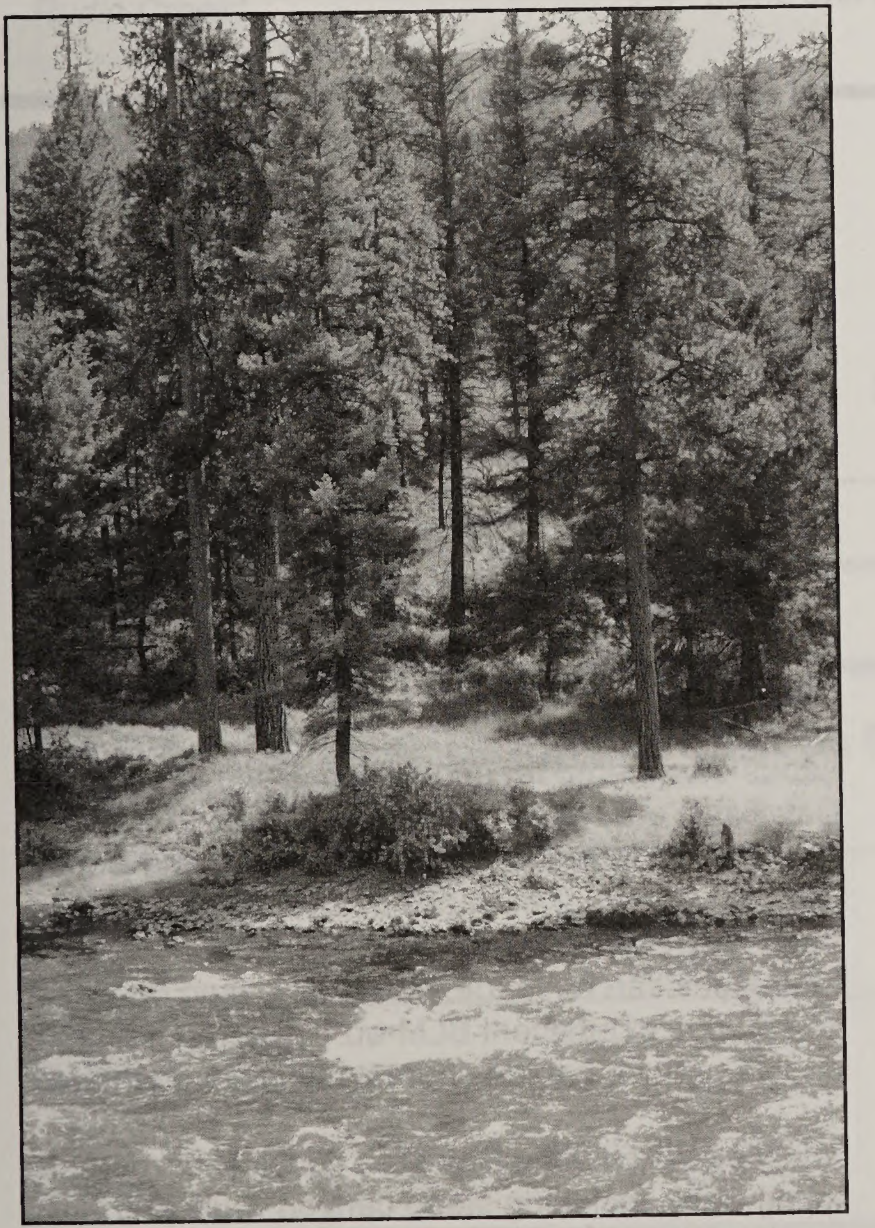
Potential acquisition lands along the North Fork John Day River, Rudio Mountain, South Fork John Day River, and Dixie Creek drainages contain approximately 19,400 acres of forestlands. Along the North Fork and its tributaries, these timber stands are somewhat continuous. The South Fork has stringers along streams, but more continuous stands on north facing slopes above the river canyon. The Rudio Mountain and Dixie Creek stands are parts of larger continuous forest stands. Some areas contain small patches or stringers of commercial forest stands along streams and canyon bottoms; other areas consist of larger stands up to 900 acres in size.

Principal forest cover types are ponderosa pine and mixed conifer. Typical south slopes are dominated by the ponderosa pine forest type (about 40% of the lands to be acquired). The north slope stands are mixed conifer types that contain primarily Douglas fir/white fir (approximately 60% of acquisition lands). Most of these stands have been harvested and are becoming dominated by the Douglas fir/white fir types. The true ponderosa pine types that have been logged are still dominated by ponderosa pine.

Large Tree Component: Approximately 7,200 acres of the forested areas considered for acquisition contain trees classified as large trees. This acreage represents 37 percent of the total forested acres considered for acquisition in the John Day Basin. Density varies from stand to stand, with some areas having 2 to 16 large trees per acre. Due to recent logging activities within these stands, however, their present density average is 3 to 5 trees per acre.

Rangelands

Vegetation production on private lands generally is limited by low moisture conditions, and in some areas by shallow, rocky, and clay soils (Table 3-3). Native grassland communities host a diverse assemblage of perennial grasses and forbs. In years with abundant winter or spring precipitation, grasslands can be fairly productive; however, drought cycles occur commonly in the John Day Basin.



Mixed conifer forest stand along the N. Fork John Day River near river mile 50.

Typical vegetation in floodplains and creek bottoms includes a variety of grasses and various shrubs and trees. The drier upland sites are dominated by bluebunch wheatgrass, and the higher elevation sites by Idaho fescue. Cheatgrass or downy brome is common throughout all sites.

Among the vegetation on woodland/range sites (i.e., stringers of timber in dry canyons) are ponderosa pine, Douglas fir, lodgepole pine (*Pinus contorta latifolia*), white fir, elk sage (*Carex geyeri*), pinegrass (*Calamogrotis* spp.), Idaho fescue, wild rose, snowberry, Oregon grape, and yarrow.

Riparian/Wetland Areas

Approximately 80 miles of perennial streams and approximately 320-560 acres of associated riparian habitat are within potential acquisition lands identified to date. This includes both fish-bearing and non-fish bearing streams (Tables 3-4 and 3-5). Riparian communities on private lands proposed for acquisition are diverse; however, some are in poor condition. Logging, road building, and certain grazing practices in the North Fork drainage have reduced vegetative diversity and accelerated erosion of the tributaries and the river. Wildfires have burned portions of the uplands and riparian habitats in the last 50 years. In some areas, natural reforestation following the fires has been poor. Grazing impacts on riparian shrubs and trees have decreased bank stability, hampering recovery on a river that annually experiences ice scour and high flows. High road densities have facilitated the spread of noxious weeds into riparian habitats by opening the river and its tributaries to continued ground disturbance by vehicles and livestock.

A 1995 Properly Functioning Condition (PFC) assessment of riparian/stream habitats identified the North Fork John Day River as Functioning-at-Risk (FR). The potential acquisition tributaries are also estimated to be Functioning-at-Risk, or better (see glossary).

Potential riparian communities in the North Fork drainage are largely determined by topography, elevation, and aspect. Upper riparian habitats with shady northerly and easterly aspects, which are less prone to drying, are more densely vegetated with greater species diversity of shrubs and sedges. These habitats exhibit high potential for

Table 3-3. Vegetative Species on Rangelands in John Day Basin.

Area	Grasses and Forbs	Shrubs and Trees
Floodplains and creek bottoms	Grasses: Bluebunch wheatgrass *(Agropyron spicatum)*, basin wildrye (*Elymus cinereus*) timothy (*Phleum pratense*) bluegrass *(Poa* spp.*)* cheatgrass (*Bromus tectorum*).	Wild rose (*Rosa* spp.), snowberry (*Symphyoricarpos albus)*, ponderosa pine (*Pinus ponderosa*), juniper (*Juniperus* spp.), Douglas fir (*Psuedopsuga menziesii*), and white fir (*Abies concolor*)
Drier uplands	Grasses: Bluebunch wheatgrass, Idaho fescue (*Festuca idahoensis*), Sandberg's bluegrass (*Poa secunda*), and needle grasses (*Stipa* spp.).	
Higher elevations	Grasses: Idaho fescue, bluebunch wheatgrass, bluegrasses, bottlebrush squirreltail (*Sitanion hystrix*), and bromes (*Bromus* spp.). Forbs: Yarrow, Indian paintbrush (*Castilleja* spp.), and onion (*Allium* spp.).	Sagebrush, bitterbrush, wild rose, snowberry, and Oregon grape (*Berberis* spp.).

rapid recovery from disturbance. In more arid locations, particularly the lower part of the drainage, ground cover is naturally more sparse and streambanks more vulnerable to erosion. These communities also have high potential for recovery, but at a slower rate than less arid areas.

Some unroaded sections of North Fork tributaries have not been logged nor subjected to poor grazing management. In these areas, patches of old-growth forests are intact on the surrounding hillsides, and riparian communities are very diverse and in good condition.

Riparian habitats on the South Fork John Day River acquisition parcels have good vegetation structure, diversity, and stability. Grazing management has been conducive with maintaining and improving conditions in these areas. Overstory species include ponderosa pine and Douglas fir, with willows, dogwoods, and alders dominating the understory. A 1995 PFC assessment of BLM-administered lands in the South Fork rated them as properly functioning. Adjacent acquisition land on the South Fork and Indian Creek is estimated to be Functioning-at-Risk, or better.

Potential acquisition lands in the Rudio Mountain area that have stream habitat include Rudio and Holmes creeks (both rated as properly functioning), Lost Fawn Creek, and other low order drainages.

Special Status Plant Species

Lands considered for acquisition within the John Day Basin are within three general habitat areas (North Fork John Day, Rudio Mountain, and South Fork John Day). Few lands in these areas have been inventoried for botanical resources. Inferences can be made, however, based on inventories of adjacent BLM-administered lands and the unique habitat characteristics of each area.

The North Fork John Day area consists of rugged topography, including steep canyon walls and drainages flowing into the North Fork John Day

Table 3-4. Fish Habitat On Private Lands Considered for Acquisition (John Day Basin).

Drainage Subbasin and Stream Name	Acquisition Miles	Steelhead Trout	Chinook Salmon	Bull Trout	Redband Trout
North Fork John Day					
North Fork John Day River	12.0	X	X Some spawning, rearing	X Winter Habitat	X
Deerhorn Creek	0.8	X			X
Stony Creek	4.8	X	X (1.9 mi.)		X
Rush Creek	1.2	X			X
Jericho Creek	2.0	X			X
Potamus Creek	3.8	X	X (0.1 mi.)		X
Little Potamus Creek	0.6	X			X
Mallory Creek	2.8	X	X (2.2 mi.)		X
Graves Creek	3.8	X			X
Ditch Creek	4.6	X	X (1.0 mi.)		X
Cabin Creek	2.2	X			X
Wall Creek	7.8	X			X
Little Wall Creek	5.5	X			X
Lovelett Creek	0.4	X			X
Three Trough Creek	0.6	X			X
*Rudio Creek**	2.4*	X			X
Subbasin Total	**55.3**				
Upper John Day					
*Holmes Creek**	2.4*	X			X
S. Fk John Day River (below falls)	1.0	X			X
S. Fk John Day River (above falls)	3.0				X
Indian Creek, SouthForkJohn Day	2.5				X
Subbasin Total	**8.9**				
Basin Totals	**64.2**	**58.7**	**17.2**	**12.0**	**64.2**

**Future Exchanges Acquisition Area*

Table 3-5. Non-Fish Bearing Streams on Private Lands Considered for Acquisition (John Day Basin).

Subbasin	Perennial Stream Miles	Non-Perennial Stream Miles	Total Miles (Perennial and Non-Perennial)
Upper John Day	0.5	8.4	8.9
North Fork John Day	14.4	100.2	114.6
Totals	**14.9**	**108.6**	**123.5**

River. Vegetation in this area is generally a mix of western juniper grading into coniferous forest, depending on soils, elevation, and aspect. Soils are generally basalt in origin. Based on the habitat mix and nearby known populations, there is potential for five special status plant species to occur on these lands (Table 3-6). Only the South Fork John Day Milkvetch is not likely to occur on acquisition lands along the North Fork John Day River.

Henderson's and Wallowa ricegrasses, both Bureau Sensitive, occur on rocky scab flats dominated by low sagebrush (*Artemisia arbuscula*) and/or stiff sagebrush (*Artemisia rigida*). In the Prineville District, only Henderson's ricegrass is known, from a site near Shaniko and from ridgetops above the North Fork of the Crooked River. Porcupine sedge, an Assessment Species, grows sporadically throughout the Prineville District in riparian areas, generally in higher ecological condition.

Hepatic monkeyflower, also a Bureau Sensitive species, inhabits steep, generally vertical basalt cliffs where moisture is available almost season-long. It is not known from Grant County.

Arrowleaf thelypody, a Bureau Sensitive and Oregon Threatened species known from along the North Fork John Day, has a high probability of occurring on some lands proposed for acquisition. This plant prefers moist drainages, often in association with ash. Livestock grazing has extirpated Arrowleaf thelypody from much of its former habitat, making it one of the county's rare species.

Except for having less rugged topography, the Rudio Mountain area is similar in many ways to the North Fork John Day area, so similar species could be expected. In addition, an increased presence of volcanic clays in some areas would lead to an expectation of one additional tracking species: Nevius' chaenactis *(Chaenactis nevii)*. This species occupies relatively barren habitat (volcanic ash and rocky, open clay slopes), generally at lower elevations. Rocky ridges would be expected to support scattered populations of *Pediocactus simpsonii* var. *robustior* (hedgehog cactus), also a tracking species.

Because of the similarity between the South and North Forks of John Day, similar species can be expected in both areas. However, some species such as *Astragalus diaphanus* var. *diurnus* (South Fork John Day milkvetch), occur only in the South Fork John Day. This species is Bureau Sensitive and state-listed as Threatened; it occupies similar habitat as its relative, the transparent milkvetch, and is known from at least one tract proposed for acquisition.

Table 3-6. Special Status Plant Species in John Day Basin.

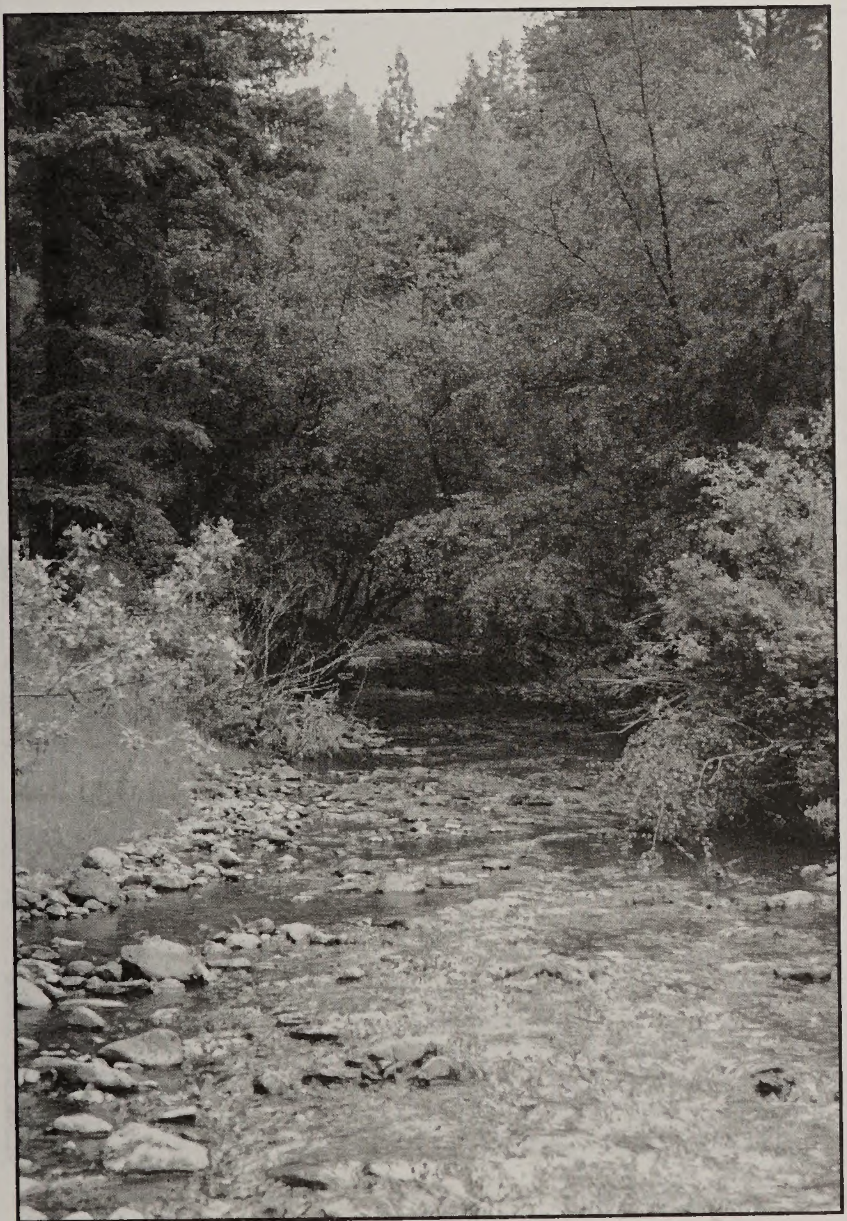
Species	Status
Henderson's Ricegrass (*Achnatherum hendersonii*)	Bureau Sensitive State Candidate
Wallowa Ricegrass (*A. Wallowensis* sp.nov.)	Bureau Sensitive
Porcupine Sedge (*Carex hystericina*)	Assessment Species
Hepatic Monkeyflower (*M.jungermanniodes*)	Bureau Sensitive State Candidate
Arrowleaf Thelypody (*Thelypodium eucosmum*)	Bureau Sensitive, State Threatened
South Fork John Day milkvetch (*Astgragulus diaphanus* var. *diurnus*)	Bureau Sensitive State Threatened

Wildlife and Fisheries

Wildlife Habitat

The wildlife resources that could potentially be acquired in the John Day Basin have relatively the same diversity of habitat types. All areas contain representative coniferous forest, riparian, sagebrush steppe, and juniper steppe habitat. Potential acquisition lands contain approximately 80 miles of perennial streams and approximately 320-560 acres of riparian habitat, which is significant considering that 285 of the 378 terrestrial species (over 75%) known to occur in the Blue Mountains are either directly dependent on riparian zones, or use them more than other habitats. Because of this dependency, these riparian areas are the most important wildlife habitats in the Blue Mountains (Thomas 1979).

North Fork John Day Subbasin: Potential acquisition lands in the North Fork John Day subbasin contain some of the most diverse riparian and coniferous forest communities of the basin's three acquisition areas. North slopes are dominated by mixed conifer overstory, shrub understory, with riparian areas occurring throughout. These slopes host wetter vegetative communities that stay green for a long time during the hot summer months, providing refugia for many wildlife species. Most of these areas have secondary growth fir species and have a harvest history, except for steep and/or rocky areas where harvesting was not feasible.



Riparian Habitat on Potamus Creek.

Slopes with a more southern aspect on the north side of the river have drier, sagebrush steppe/ juniper steppe communities. These slopes, which have inclusions of rocky ridges and outcrops, are important mule deer and elk winter range. Many of these slopes, most notably the lower portions adjacent to the North Fork, have been grazed heavily by livestock in the past and contain predominantly annual grass species. The upper portions of the slopes and ridge tops are generally in fair condition, being dominated by perennial bunchgrasses, forbs, and shrubs.

The drainages, north slopes, and higher elevations on the river's north side have coniferous forest communities, many of which have been previously harvested. However, at the heads of many drainages and on steep north slopes are some stands of coniferous forest that have not been harvested.

The North Fork provides wintering habitat for the bald eagle *(Haliaeetus leucocephalus)*, a Federally listed Threatened species. This area also lies within historic California Bighorn Sheep habitat and currently is part of a winter range providing habitat for between 1,200 and 1,500 elk and 3,000 to 4,000 mule deer.

Wildlife along this segment of the North Fork is considered to be an Outstandingly Remarkable Value by both Congress and the *North Fork John Day Wild and Scenic River Resource Assessment*.

Some of the Rudio Mountain acquisition area also drains into the North Fork, namely the watershed of Rudio Creek, and includes more than 3 miles of riparian area and numerous springs/seeps. The Rudio Creek watershed is characterized by steep drainages with rock outcrops and a diversity of representative plant community types.

Upper John Day Subbasin: Both the Holmes Creek watershed in the Rudio Mountain Area and the South Fork John Day River are within the Upper John Day Subbasin. All plant community types discussed herein are also represented in these areas.

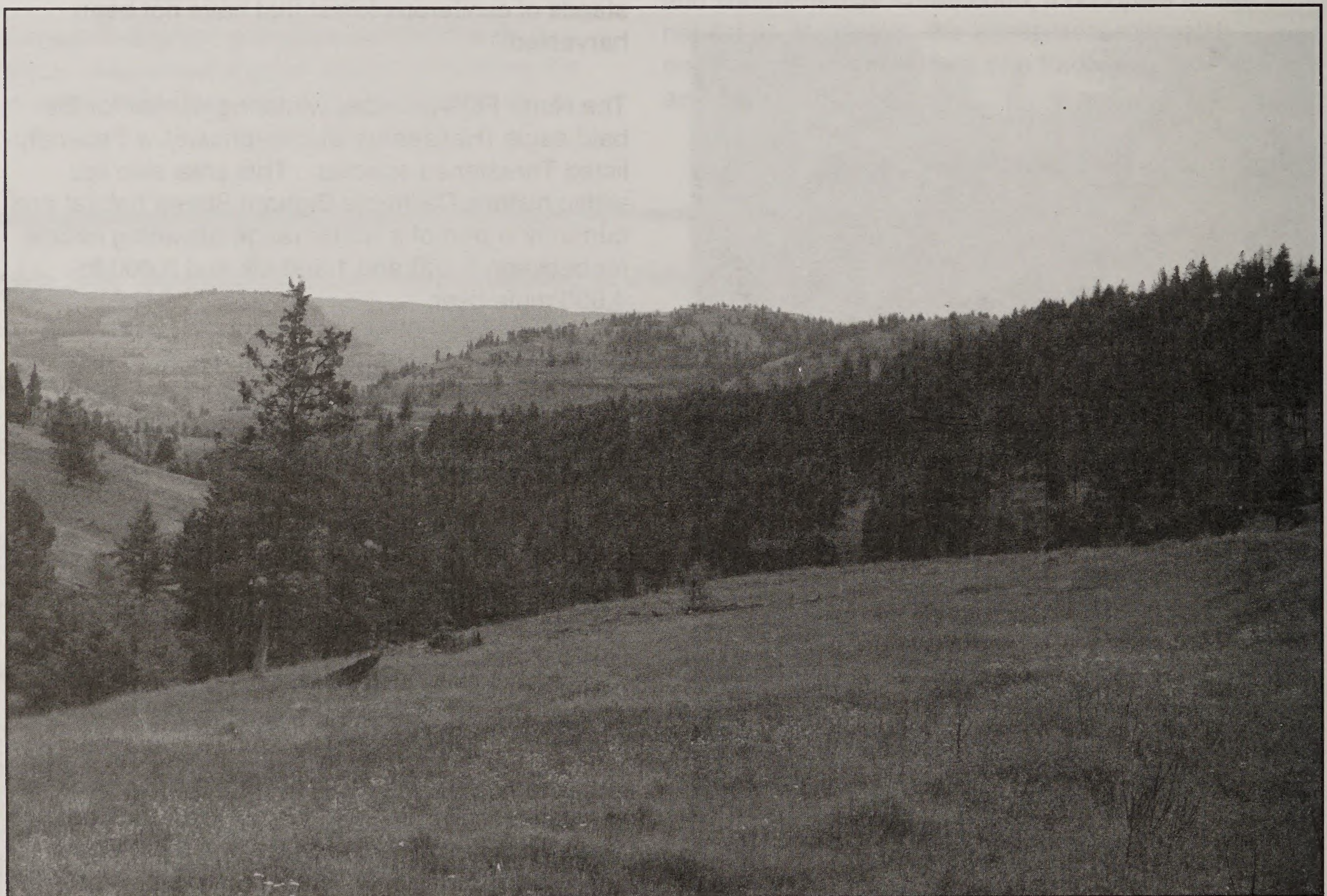
Of significance is that over 10 miles of riparian habitat (4 miles in the Holmes Creek watershed, and 6.5 miles in the South Fork John Day watershed), are in the potential acquisition area. Acquisition lands on Indian Creek (tributary to the S. Fork John Day), contain numerous aspen stands, a plant community used extensively by wildlife species.

Portions of the South Fork watershed are within the BLM/ODFW Murderer's Creek Cooperative Management Area. The lower elevations are important mule deer and elk winter range, as identified in the John Day Resource Management Plan (1985).

Fisheries

North Fork John Day Subbasin: Waterways on potential acquisition lands within this drainage provide spawning and rearing habitat for summer steelhead trout and resident redband trout (Table 3-4). Redband trout are found throughout the acquisition area, and bull trout winter habitat extends down the North Fork John Day River to Wall Creek. Adult spring chinook and summer steelhead use resting habitat in this portion of the North Fork while migrating to headwater or tributary spawning grounds. Juvenile salmon and steelhead use the North Fork, and portions of tributaries considered for acquisition, as foraging and rearing habitat while migrating to the ocean.

Potential acquisition lands on the North Fork between Wall Creek and Camas Creek (RM 22.5 to 56.5) have approximately 12 miles of river frontage. Over 43 miles of anadromous and resident trout habitat can be acquired on 15 tributaries to the North Fork John Day (Table 3-4). Fish habitat conditions on these streams vary, with most streams being rated fair to good and some poor. The majority of stream segments show little vertical or lateral scour and possess good potential for riparian recovery. Channel structure generally is good, although riparian vegetation and streambank stability have been impacted by past grazing management practices.



The JV Ranch is part of a winter range that provides habitat for 1,200 - 1,500 elk and 3,000 - 4,000 mule deer. Photo overlooks Boneyard Canyon and Wall Creek drainage.

Upper John Day Subbasin: Potential acquisition lands on the South Fork John Day River have about 1 mile of anadromous habitat below Izee Falls and 3 miles of resident salmonid habitat above the falls. Another 2.5 miles of resident salmonid habitat are on potential acquisition lands on Indian Creek, a tributary to the South Fork above Izee Falls. Izee Falls is a natural fish passage barrier, and only resident redband trout and non-game fish are found above the falls. Fish habitat on these lands is good, with good channel structure, diverse riparian vegetation communities, and few bank erosion problems.

About 2.4 miles of anadromous fish habitat is identified on potential acquisition lands on Holmes Creek, a tributary to the main stem John Day River. Holmes Creek has good vegetation cover with a diversity of riparian species. Anadromous fish passage into the Holmes Creek drainage was blocked during past decades by a steep culvert. A 1992 project by Oregon Department of Fish and Wildlife installed a new culvert that facilitates both upstream and downstream passage of migrating steelhead. In 1993, ODFW and the landowner documented adult steelhead spawning in Holmes Creek.

Recreation

Recreation values are discussed by areas, including North Fork John Day River, Rudio Mountain, and South Fork John Day River.

Recreational Values and Opportunities

North Fork John Day River, JV Ranch: Lands proposed for acquisition along the North Fork John Day River from Camas Creek to Potamus Creek include the river canyon (“rim to rim” for the most part) that borders public lands managed by the Umatilla National Forest and BLM. These lands provide a wide diversity of high quality, motorized and non-motorized recreation opportunities that currently are limited to private landowners and their guests.

The parcels offer excellent opportunities for fishing and elk hunting, the latter being evident in that some private landowners open their land for fee hunting. Other recreation opportunities include camping, horseback riding, hiking, and wildlife

N. Fork John Day River near river mile 40.

viewing. The primitive roads, abundant wildlife, and attractive scenery also make this a desirable area for off-road vehicle use and mountain bike touring, both of which are currently at low use levels. Although adjoining public lands offer abundant outdoor recreation opportunities, they also have had limited use due to their remote location, primitive road access, and the large percentage of private lands.

For the most part, boating use along the North Fork John Day River from Camas Creek to Monument has also been low, but in recent years has been increasing among private boaters. Water flows limit the floating season to about three months during the spring. The 44-mile float from Camas Creek to Monument passes through approximately 66 percent private lands and 34 percent public lands. A 1992 campsite inventory of this river segment identified 53 dispersed river sites providing camping opportunities, 19 of which are located on public lands. Of the 34 sites on private land, 13 are located on lands considered for acquisition. The newly constructed Monument River Access Park in Monument provides a public boat launch and parking facility used by those people floating this river segment, as well as the segment below.

The North Fork John Day River from RM 20.2 (4 miles above Monument) to RM 76 (19 miles upstream of Camas Creek) is designated an Oregon State Scenic Waterway and classified as an Accessible Natural River Area. All of the potential acquisition parcels located within 0.25-mile of the mean high water line of the North Fork John Day are within this designated area.

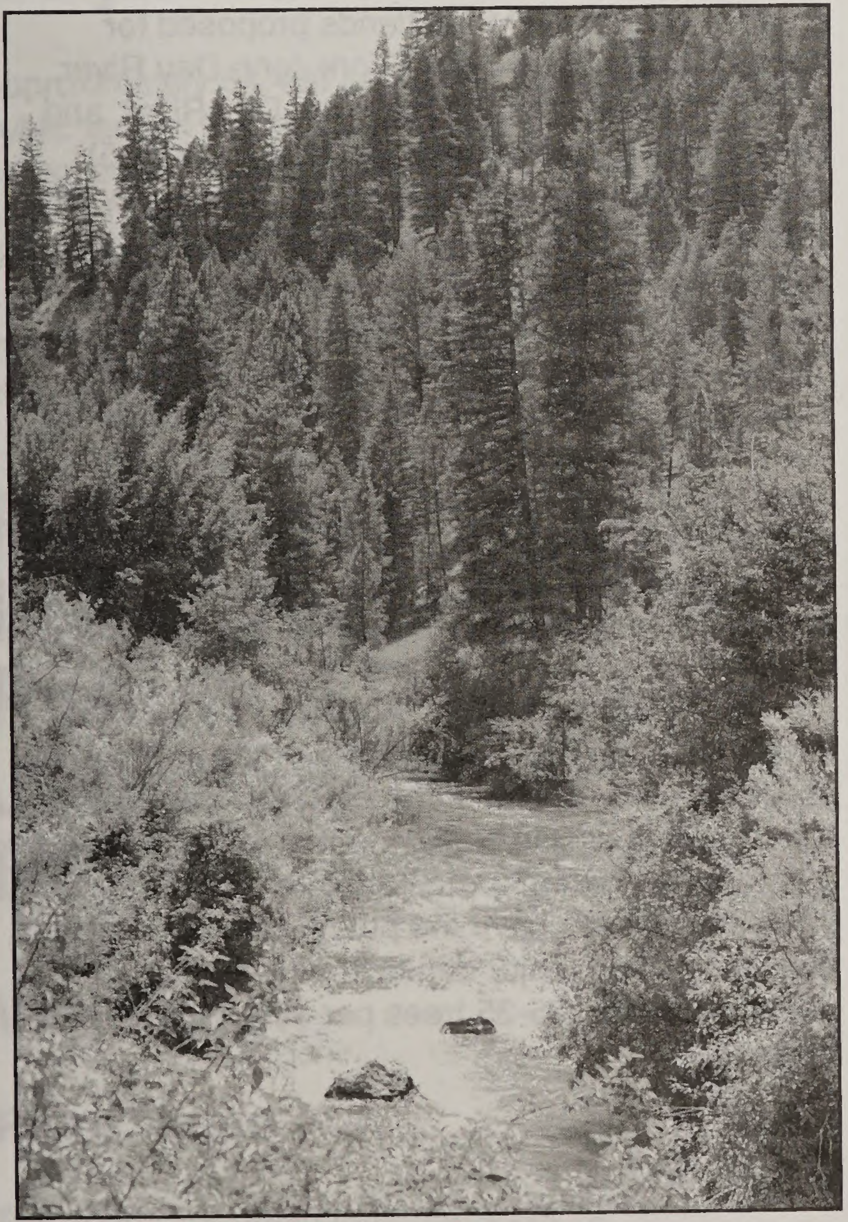
Rudio Mountain: Some potential acquisition tracts in the Rudio Mountain area border BLM-administered lands between State Route 19 and Rudio Mountain to the east. These lands provide a variety of motorized and non-motorized recreational opportunities currently limited to private landowners and their guests.

These parcels offer excellent deer and elk hunting opportunities, as realized by several private landowners who have opened their lands for fee hunting. Other recreational opportunities in the

The JV Ranch, which is being proposed for acquisition, offers many scenic vistas such as this one overlooking the Ditch Creek drainage.

Rudio Mountain area include camping, horseback riding, hiking, wildlife viewing, and antler hunting. Although mountain bike touring here is currently low, the area has primitive roads, abundant wildlife, and scenic resources that make this an attractive area for such use. The adjoining public land tracts have numerous outdoor recreation opportunities that are restricted by limited public access due to the lack of public easements across private lands. Public land users have focused extensive efforts in this area to gain public access across private lands, with the intent to reach the isolated BLM-administered tracts for hunting purposes.

South Fork John Day River. Potential acquisition tracts in this drainage include some parcels along the South Fork John Day River and some that adjoin public lands managed by BLM, ODFW, and the USFS. These lands provide a wide diversity of high quality, motorized and non-motorized recreation opportunities including camping, trout fishing, wildlife viewing, picnicking, swimming, hiking, horseback riding, mountain bike riding, and hunting for big game and upland birds. Most of these activities, however, are currently limited to the private landowners, although some private landowners open their lands for fee hunting. Recreational use of the adjoining public lands is relatively low, partially due to the area's rustic undeveloped nature and also to their limited accessibility. In 1996, there were an estimated 4,000 recreation user days in the South Fork John Day River area.



Anadromous salmonid habitat on the Wild and Scenic S. Fork John Day River near the mouth of Deer Creek.

A 1992 campsite inventory for the South Fork John Day River identified 228 dispersed campsites, 104 of which are on public lands (less than 50% of total campsites). Of the 124 campsites on private lands, 54 are located on potential acquisition tracts. One parcel known as Ellingson Mill is located in a small bend of the river buffered from the sights and sounds of the road. This potential acquisition area offers an excellent camping opportunity that is rare in this narrow canyon.

A proposed addition of the Oregon State Recreation Trails System would pass through an acquisition tract on an east-west route near the Murderers Creek drainage.

Access

North Fork John Day River. Road access to the parcels includes a public access easement acquired by ODFW along a primitive/graveled road following the North Fork from Camas Creek to Potamus Creek (17 miles) and private road access up Jericho, Stony, Hunter, Potamus, Mallory, Graves, Cabin, and Little Wall Creeks.

Rudio Mountain: Public road access to these parcels includes the Franks Creek road from Dayville, Rudio Creek road from the north (currently open to non-motorized travel only), and the Dick Creek local access road from the west. The BLM also has an easement from the west via Holmes Creek road; this easement is currently interpreted to apply to administrative use only.

Wild and Scenic Rivers

Five potential acquisition parcels are within the South Fork John Day Wild and Scenic River, which was designated by the Oregon Omnibus Wild and Scenic River Act of 1988. The Act designated the 47-mile segment from the Malheur National Forest boundary to Smokey Creek as a recreational river. The law identified certain outstandingly remarkable values and other significant values that must be protected and enhanced by the managing agency.

These values include scenic, recreational, fisheries, wildlife, geologic, paleontological, and botanical resources. The entire Wild and Scenic portion of the South Fork is administered by the BLM through interagency cooperation with other federal, state, and local government agencies.

In the 1993 draft John Day River Management Plan, the BLM identified proposed Wild and Scenic River boundaries for the South Fork. After considering public comment, the BLM is currently developing a new draft of this management plan. The BLM is considering exchanging lands within the proposed Wild and Scenic boundary that would create a net gain of public river miles and road access. Acquisition of the five parcels could bring approximately 1,270 acres of private land into public ownership within the Wild and Scenic River corridor, including about 4 miles of river access on the South Fork with 3.5 miles of public road access. Public access to the area is now available via a gravel road from Dayville and various Forest Service roads.

Floodplains

Approximately 70 acres of potential acquisition lands on the South Fork John Day River are within floodplain zones designated by the Federal Emergency Management Agency (FEMA). The North Fork John Day acquisition area includes approximately 218 acres along the river that, although not designated as such by FEMA, might be considered a floodplain. The 70-acre area represents less than one percent of the total proposed acquisition lands in the John Day Basin.

Soils

Prime or Unique Farmland: The available soil survey information on potential acquisition lands is insufficient to fully determine if any of the lands are prime or unique farmlands. However, based on the criteria for qualifying land as prime or unique farmland including certain soils and irrigation, the lands proposed for acquisition are not considered to have prime and unique farmlands. Although the exchange may include some soil mapping units that could be prime or unique farmlands when irrigated, the lands have no irrigation rights so they do not meet the criteria.

Cultural Resources

No significant cultural resources are known to occur on private lands within the geographic area being considered for acquisition.

Traditional Use Areas: Traditional subsistence areas for fishing, hunting, and gathering roots and berries are known for three tributaries of the North Fork John Day River within acquisition lands. These usual and accustomed areas were used by the tribes of the Warm Springs and Umatilla reservations, the Columbia River, and the Paiute.

Paleontological Resources

Some private lands within the geographic area are known to contain significant paleontological resources; however, none are known to occur on private lands proposed for acquisition.

Timber Resources

Approximately 88 million board feet (MMBF) of commercial size timber is presently on 19,400 acres of commercial forestlands proposed for acquisition along the North Fork John Day River, Rudio Mountain, South Fork John Day River, and Dixie Creek drainages (Appendix A, Table A-5). Forest stands range from small stringers or patches of timber (less than 10 acres) to larger stands up to 900 acres. Commercial trees in the North Fork stands have a diameter (DBH) range of 7 to 49 inches and an average diameter of 12.5 inches. This data is based on cruise information obtained from private cruisers contracted by Clearwater Land Exchange and from field check cruises by BLM foresters for data verification. Data for South Fork, Dixie Creek, and Rudio Mountain timber stands are based on office estimates and field knowledge.

Most forest stands are located in areas categorized as site class 5. Some of the more favorable areas are classified as site class 4, and a lesser amount (primarily in riparian areas) are site class 3. These three site classes have the potential to re-establish themselves into major dense stands that could equal more than 25-35 trees per acre in the long term.

Livestock Grazing

Most lands being considered for acquisition are usually grazed every year, some under lease arrangements. Generally livestock use is heaviest in riparian areas or near water developments, and least used areas are upland steep slopes. Private tracts generally have better access to water sources and also more water developments for livestock (such as springs and stock ponds) than isolated BLM-administered tracts.

Based on the approximate acreage being proposed for acquisition (68,700 acres in all phases) and professional judgment, the predicted livestock grazing use would be about 8-15 acres/AUM, or 4,580-8,587 AUMs.

Public Lands Considered for Disposal in John Day River Basin

Approximately 54,400 acres of BLM-managed public land in the John Day River Basin are proposed for disposal (Appendix A, Tables A-1a and A-1b). These lands are in Grant, Wheeler, Umatilla and Morrow Counties, and scattered in 419 parcels, ranging in size from 10 acres to 2,320 acres. Of the total parcels, 323 (77%) are 80 acres or less; and further, 244 (58%) are 40 acres or less.

Resources on Public Lands Identified for Potential Disposal in John Day River Basin

Vegetation

Forestlands

The John Day Basin potential disposal lands include approximately 11,170 acres of forested lands on approximately 180 parcels, which are scattered throughout Grant County, southwestern Umatilla County, southern Morrow County, and northeastern Wheeler County.

Principal forest cover types are ponderosa pine and mixed conifers. About 40 percent of the forested lands identified for potential disposal are typical south slope stands dominated by ponderosa pine in the overstory and Douglas fir in the understory. Approximately 15 percent are lower elevation, gently sloped areas almost exclusively in ponderosa pine. The mixed conifer timber types are in two categories; about 30 percent are dominated by a ponderosa pine/Douglas fir overstory with a white fir understory, and approximately 15 percent contain primarily Douglas fir and white fir in both the overstory and the understory.

Large Tree Component: Approximately 6,426 acres of BLM-administered forestlands identified for disposal in the John Day Basin contain large trees. This acreage represents 57 percent of the total forested acres considered for disposal in the John Day Basin. Density of large trees on these forestlands varies from stand to stand, ranging from 2 to 25 trees per acre and generally averaging between 5 and 9 trees per acre.

Rangelands

Vegetation on public rangeland tracts considered for disposal is similar to that on private rangelands considered for acquisition. Most tracts are upland sites; few are floodplain or benchland areas. Tracts are generally small in size (most less than 150 acres), intermingled, and surrounded by private lands.

Riparian/Wetland Areas

The potential disposal tracts have approximately 15 miles of perennial streams and associated riparian habitat, including both fish and non-fish bearing streams (Tables 3-7 and 3-8). Riparian communities on disposal tracts often are in poor condition. In most cases, these riparian habitats are difficult to manage because they are small (usually less than 0.35 miles) and are surrounded by private land. Some tracts have riparian habitats in fair or good condition, but these are still difficult to access and subject to outside influences that complicate efforts by the BLM to actively manage them.

Table 3-7. Fish Habitat on Public Lands Considered for Disposal in John Day Basin.

Drainage Subbasin and Stream	Tract No.	Disposal Miles	Chinook Salmon	Steelhead Trout	Bull Trout	Redband Trout	Cutthroat Trout
Upper John Day							
W. Fork Indian Creek	G-219	0.2		X		X	X
Pine Creek	G-218	0.2		X		X	X
McClellan Creek	G-197	0.2		X		X	X
Grub Creek	G-167	0.3		X		X	
Bear Creek	G-161B	0.2		X		X	
Beech Creek	G-150A	0.2		X		X	
Belshaw Creek	G-143	0.1		X		X	
Franks Creek	G-133B	0.7		X		X	
John Day River	G-136B	0.1		X		X	
S. Fork John Day	G-430	0.2				X	
Tamarack Creek	G-276	0.3				X	
Utley Creek	G-261	0.6				X	
Flat Creek	G-260	0.9				X	
Subbasin Subtotal		**4.2**					
Upper Crooked River							
S. Frk. Beaver Creek	G-230 G-234	0.7 (0.4 +0.3)				X	
Dobson Creek	G-235	0.3				X	
Swamp Creek	G-239B	0.3				X	
Subbasin Total		**1.3**					
Middle Fork John Day							
Middle Frk. John Day	G-34 G-703	0.6 (0,4 +0.2)	X (seasonal rearing)	X	X (winter habitat)	X	
Long Creek	G-28, 703	0.3		X		X	
Subbasin Total		**0.9**					
North Fork John Day							
Cottonwood Creek	G-64, G-70, *G-110**	1.6 (1.1 + 0.3 *+ 0.2*)*		X		X	
*Squaw Creek**	*G-113,* *120,* *137**	*1.5* *(0.4 + .08* *+ 0.3)*		X		X	
Pine Creek	UM-80	0.3		X		X	
Camas Creek	UM-70	0.05	X	X		X	
Wilkens Creek	UM-57	0.05		X		X	
Snipe Creek trib.	UM-54	0.05		X		X	
Subbasin Total		**3.55**					
Total Miles		**9.95**	**0.65**	**6.65**	**0.60**	**9.95**	**0.60**

**Future Exchanges Disposal Parcels*

Table 3-8. Non-Fish Bearing Streams on Public Lands Considered for Disposal in John Day Basin.

Subbasin	Perennial Stream Miles	Non-Perennial Stream Miles	Total Miles (Perennial and Non-Perennial
Upper John Day	4.2	53.5	57.7
Lower John Day	0.0	1.9	1.9
Middle Fork John Day	0.0	3.5	3.5
North Fork John Day	0.5	27.0	27.5
Totals	**4.7**	**85.9**	**90.6**

Special Status Plant Species

No special status plants have been found on BLM disposal tracts to date; however, one Tracking Species was found: Nevius' chaenactis (*chaenactis nevii*). Almost 1,500 plants were observed in populations ranging from 5 to "hundreds" at 10 separate locations, mostly in the Monument and Dayville areas. The populations were found on red and white barren ash deposits, generally in areas heavily impacted by livestock grazing.

All species found during the inventories are expected to be present on at least some of the tracts yet to be inventoried. In addition, arrowleaf thelypody was found at two locations on private land adjacent to inventoried tracts; this species is also known from at least two tracts near Kimberly that are proposed for disposal, but do not have complete inventories. Further inventory of the tracts in the Spray-Kimberly-Monument area is expected to identify additional populations of this Bureau Sensitive species. All surveys will be complete before the final EIS and Record of Decision are published.

Wildlife and Fisheries

Wildlife Habitat

Wildlife habitat on public lands considered for disposal in the John Day Basin is relatively similar to that described in the previous section for potential acquisition areas. Major habitat components include juniper steppe, sagebrush steppe, and coniferous forest representative of the Blue Mountains and High Lava Plains Provinces.

Most potential disposal lands are isolated from other public lands and, except for some of the coniferous forest type, have relatively similar habitat as adjacent private lands. This similarity is attributed to both public and private lands having similar land uses on riparian, sagebrush-steppe, and juniper steppe habitat types. The difference for the coniferous forest habitat types is that, in many cases, the public lands have not been logged whereas adjacent private lands have been logged.

Wildlife use of all habitats, except the coniferous forest type, is assumed to be the same across jurisdictional boundaries. This assumption has been documented using wildlife species assessments of the parcels considered for disposal. Coniferous forest types in later seral stage are expected to have a higher species diversity than the adjacent private land, considering private land has been logged and adjacent public land has either not been logged or is only minimally impacted. The higher species diversity is attributed to the structural attributes of the late-seral forests, which provide more usable habitat for species using forested habitat types.

These small isolated forested tracts are important wildlife habitat; however, their juxtaposition in the landscape relative to other similar habitat limits their effectiveness in providing habitat for viable populations of wildlife species. This is particularly important to note because the viability of many wildlife populations is believed to depend on large tracts of contiguous habitat that are minimally isolated from other such habitats (Petit et al. 1995). The increased edge habitat on these isolated tracts by surrounding forest activities can significantly affect wildlife populations. In these cases, overall species richness or number of species represented in an area may temporarily increase with the influx of edge-adapted opportunists, but only at the expense of forest interior species (Noss 1983).

Old-Growth Habitat

To date, 42 forested parcels scattered throughout the John Day Basin totaling approximately 2,270 acres have been determined to have old-growth characteristics (Appendix B, Table B-5 and B-6). Most of the old-growth habitat remaining on BLM-administered lands in the John Day Basin is in small, isolated and highly fragmented patches. These patches range in size from 6 to 243 acres, with the average size being 54 acres. For comparison, the Forest Service manages approximately 236,600 acres of coniferous forest classified as old growth in the John Day Basin (USFS-Malheur, Umatilla, and Ochoco National Forests). Most BLM-administered tracts classified as having old growth are the drier, ponderosa pine-dominated type with bunchgrass or bitterbrush understories.

Fisheries

Approximately 10 miles of fish-bearing streams are within the potential disposal parcels (Table 3-7). These fish habitat segments range from 0.1 to 1.1 miles in length, are scattered and non-contiguous on 31 parcels of public land, and according to field reviews range from poor to good condition. Steelhead trout, redband trout, Westslope cutthroat trout, chinook salmon, and a variety of non-salmonids can be found in some of these stream segments.

After review of the available literature, field surveys, and communications with Oregon Department of Fish and Wildlife, BLM has determined that two stream segments (0.2 and 0.4 miles in length) within potential disposal tracts are within historic bull trout habitat on the Middle Fork

Parcel #G150A. Approximately 100 acres of old-growth forest habitat is within this 600-acre proposed disposal parcel.

John Day River. Presently these stream segments are presumed unoccuipied by bull trout because of current watershed habitat conditions. Several upland disposal parcels drain into bull trout summer habitat in the Upper John Day subbasin above John Day, but do not contain fish habitat.

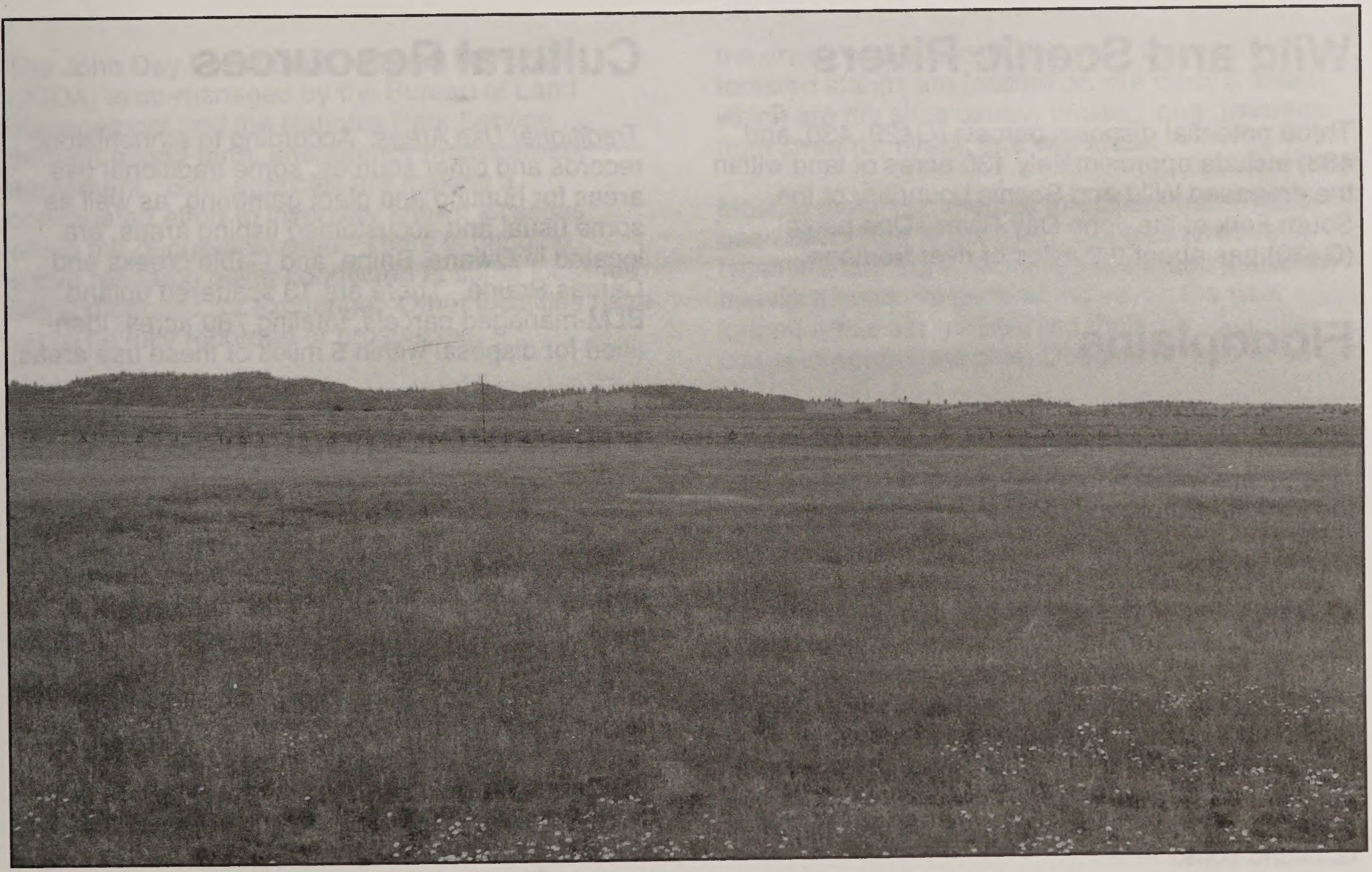
Recreation

Many tracts identified for potential disposal have limited recreational opportunities due to limited access, as discussed in the following text. Activities that do occur are dispersed opportunities, such as hunting, fishing, sightseeing, off-highway vehicle use, horseback riding, and hiking, but even these are limited by access.

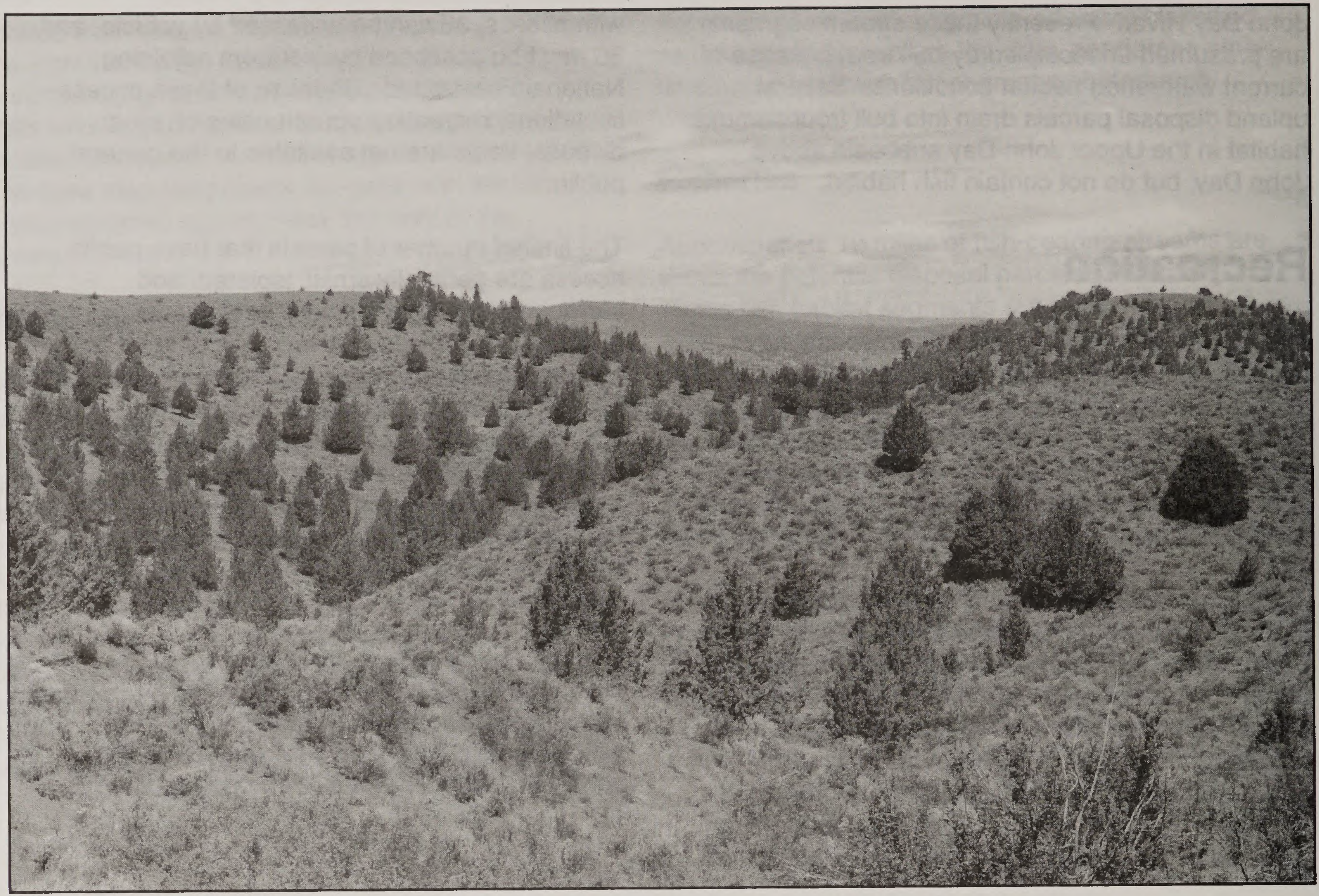
Access: Public access is not available to most tracts considered for disposal within the John Day Basin. Specifically, there is no public access to 17 of the 26 disposal parcels in the Umatilla and Morrow counties portion of this basin. Of the remaining nine parcels, five can be reached by public roads, and four adjoin National Forest land. Further, 317 of the 386 tracts in Wheeler and Grant counties do not have public access. Of the parcels with access, 33 can be accessed by vehicle, and 36 must be accessed by foot from adjoining National Forest land. Because of these access limitations, recreation opportunities on most disposal tracts are not available to the general public.

The limited number of parcels that have public access are generally small, isolated, and surrounded by private lands. In other cases, the road access crosses only a corner of the tract, making access to interior areas difficult. To reach interior parts of the parcel, a person must accurately locate the point at which the road crosses public land and then travel overland. Small isolated parcels pose a challenge for recreationists who are responsible for respecting private property boundaries, which often are not marked except near roads.

Non-motorized public access is available to the tracts adjoining National Forest lands by overland travel from unimproved Forest Service roads. The difficult access and small size of these tracts, however, limits their recreation opportunities.



Parcel #G103, a 40-acre proposed disposal tract near Long Creek, does not have public access.



Parcel G250A, a 400-acre proposed disposal parcel near Pyramid Point, contains sagebrush and western juniper.

Wild and Scenic Rivers

Three potential disposal parcels (G429, 430, and 433) include approximately 130 acres of land within the proposed Wild and Scenic boundary of the South Fork of the John Day River. One parcel (G430) has about 0.2 miles of river frontage.

Floodplains

Approximately 10 acres of the potential disposal lands on the South Fork John Day River near River Mile 37 are within floodplain zones designated by the Federal Emergency Management Agency (FEMA).

Soils

Prime or Unique Farmland: A portion of Parcel M30 meets the soil requirements for prime farmland when irrigated. This portion has been dryland farmed in the past, but was seeded to grass about 10 years ago. There are no unique farmland soils.

Cultural Resources

Traditional Use Areas: According to ethnohistoric records and other sources, some traditional use areas for hunting and plant gathering, as well as some usual and accustomed fishing areas, are located in Owens, Snipe, and Cable creeks and Camas Prairie. There are 13 scattered upland BLM-managed parcels, totaling 780 acres, identified for disposal within 5 miles of these use areas.

Paleontological Resources

Several key vertebrate fossils are located on BLM-managed public lands proposed for exchange. The majority of these fossils are John Day Formation localities [36-18 millions of years ago (mya)], although localities of the Mascall (approx. 17 mya) and Rattlesnake (approx. 7.2 mya) Formations may also occur. Many of the known localities have both national and international significance. Some are the type localities for particular species of vertebrate fossils. However, some localities from these Formations contain botanical fossils that could be considered significant.

Parcel #G231, a 240-acre proposed disposal parcel, contains a scattering of large Ponderosa Pine and Douglas fir as well as some aspen and juniper

The John Day Fossil Beds National Monument (JODA) is co-managed by the Bureau of Land Management and the National Park Service through a long-term, interagency management agreement. Both agencies are making a coordinated effort to inventory known localities within the geographic area. There is ongoing, active research being conducted at some localities being proposed for exchange. Other localities have yet to be fully recorded or prospected.

Timber Resources

Approximately 11,170 acres of commercial forestland having roughly 83 million board feet (MMBF) of commercial timber volume are among the potential disposal lands in the John Day Basin (Appendix A, Table A -5 and Maps 1, 2 and 3). Volumes were determined from cruise data and previous BLM inventory records. Forest stands range from 1 acre to approximately 300 acres in size, with the average forest stand being 30 to 35 acres. Some timber stands cover only portions of a specific BLM parcel, with timber mainly present in the draws and drainage bottoms. Generally, these forested stands are located on site class 5 areas, which are dry sites usually located long distances from streams, rivers, and wet areas.

Most of these commercial forestland tracts have been harvested in the past. Douglas fir/white fir types are starting to dominate the areas that were heavily logged. In general, however, the past logged areas are maintaining their mixed conifer status of ponderosa pine, Douglas fir, and white fir.

Livestock Grazing

Lands considered for disposal include 116 allotments permitted for approximately 6,320 AUMs. Most of these allotments are categorized as Custodial, meaning they are unfenced, small tracts that are intermingled with much larger acreages on non-BLM rangelands. Livestock usually graze these tracts about one month each year, which is a lighter use level than recent history. There are few or no water developments for livestock on the potential disposal lands.

Description of Umatilla River Basin

Introduction

The Umatilla River Basin encompasses approximately 1.5 million acres between the John Day Basin and the Columbia River/Washington state line, extending from the Blue Mountains westward across Umatilla and Morrow counties, and into Gilliam County (Figure 1-2).

Within the Umatilla Basin are portions of two physiographic provinces: Blue Mountain and Columbia River (described at beginning of Chapter 3). See Figure 1-3.

Most of the Umatilla River Basin is privately owned (Figure 3-4). Almost 40 percent of the basin is managed by Federal agencies (BLM and USFS), primarily the U.S. Forest Service. Only a fraction of the lands are managed by the State. The tribal lands are those within the boundaries of the Umatilla Indian Reservation.

Geology/Water/Soils/Air

Multiple flows of lava known as the Columbia River basalt underlie nearly all of the Umatilla River Basin. Older volcanic, sedimentary, and metamorphic rocks are exposed along the crest of the Blue Mountains. Sedimentary deposits cover the basalt throughout much of the basin. Alluvium deposited by modern rivers and streams is common in valleys and floodplains, and windblown silts and fine sands cover large areas upslope from the alluvium.

Mountains stretch along the basin's southern and eastern boundaries. The mountainous topography consists of rugged hills, mountains, and plateaus cut by streams, often forming deep and steep-sided canyons. The plateau sloping northward from the Blue Mountains to the Columbia River ranges from moderately rolling to flat. Elevations range from less than 300 feet on the Columbia River, to around 3,000 feet at the toe of the mountains, and 6,000 feet at its highest mountain point.

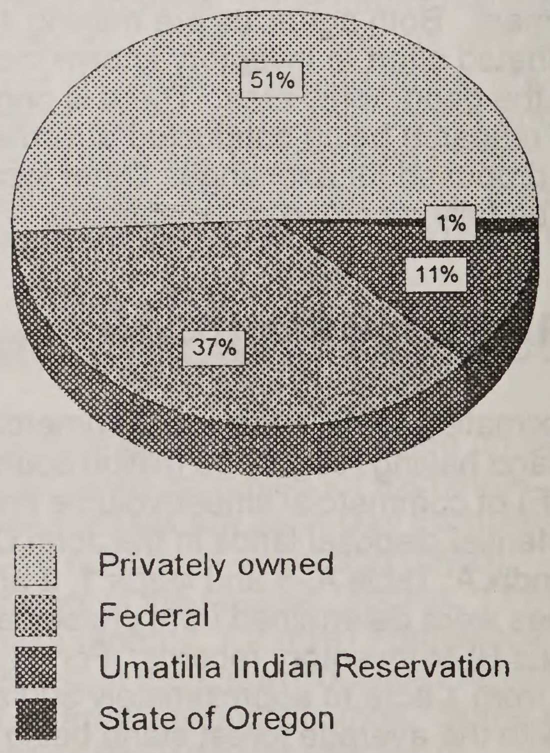
The Umatilla River drains the major portion of the basin, rising on the west slope of the Blue Mountains east of Pendleton and flowing about 115 miles to its confluence with the Columbia at the town of Umatilla. Other major streams draining significant portions of the basin are the Walla Walla River in the northeast and Willow Creek in the southwest.

Annual precipitation ranges from less than 10 inches in a band along the Columbia River, to 45 inches in the Blue Mountains. Annual temperatures for the lower elevation areas average about 50 degrees.

The Umatilla Basin has four general soil classification groups:

- Sandy droughty soils in old alluvial deposits. These soils display a high hazard for wind erosion and a slight hazard for water erosion.
- Well-drained, windblown silt soils that mantle slopes, with textures ranging from very stony loam to silt loam. These soils display a moderate hazard for wind erosion and a high hazard for water erosion.
- Well-drained soils on uplifted, folded, and dissected ridgetops and steep slopes, with textures ranging from stoney silt-loam to silty clay loam. These soils display a high hazard for water erosion.
- Well-drained, soils on gently sloping plateaus and ridgetops, as well as very steep hillslopes formed of uplifted basalt with some ash deposits. The texture of these soils range

Figure 3-4. Land Ownership in Umatilla Basin.



from very cobbly silt loam to loam. These soils display a moderate to high hazard for water erosion.

Air quality in the basin's northern portion of the basin is occasionally affected due to susceptibility of sandy soils to wind erosion. Blowing soil is known to reduce visibility along Interstate Highway 84.

Vegetation

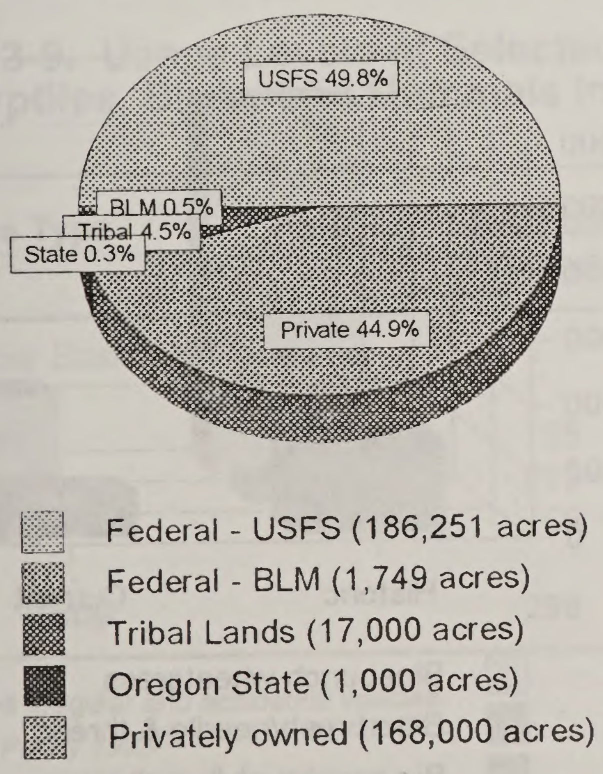
Forestlands

The Umatilla Basin encompasses approximately 374,000 acres of forested lands for all ownerships. Only a small portion (1,749 acres or less than 0.05%) is managed by BLM (Figure 3-5). Most of the basin's forestland is managed by the Forest Service or is under private ownership (50% and 45%, respectively).

The BLM-managed forestlands are scattered on 28 separate parcels. Most are isolated from other public lands; and many of the parcels have forest health concerns, in varying degrees, from overstocking of young trees to severe mortality.

Considering all ownerships in the basin, Douglas fir is the principal forest cover on these forestlands.

Figure 3-5. Ownership of Forestlands in Umatilla Basin (Source: OWRD 1988, Umatilla Basin Report)



There are small amounts of western larch, ponderosa pine, grand fir, and lodgepole pine. Generally, the grand fir and lodgepole pine grow at intermediate elevations with the Douglas-fir type; the ponderosa pine type is at lower elevations, and the Engelmann spruce-subalpine fir type grows at higher elevations.

Young grand fir dominates some sites that have been harvested and had fire excluded, and lodgepole pine favors areas subjected to intense wildfires.

Large Tree Component: Of the forestlands in the Umatilla Basin managed by BLM, approximately 775 acres have large trees. This acreage is a minor component of the basin compared to the acreage within National Forests and in private ownership.

Rangelands

Much of the Umatilla Basin has sandy soils, which are dominated by shrub-grasslands. The potential native vegetation consists of a sparse overstory of basin big sagebrush or antelope bitterbrush and an understory of needle-and-thread or bluebunch wheatgrass. Forbs are minor components of these plant communities.

On the Columbia Plateau, the potential native vegetation is true grassland. Bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass are dominant; there are few shrubs. Herbaceous wildflowers comprise less than 15 percent of the potential native plant community.

The foothills of the Blue Mountains are both true grasslands and shrub-grasslands. The potential natural vegetation of the shrub-grassland consists of an overstory of common snowberry, mallow ninebark, rose or hawthorn, and an understory of Idaho fescue.

Many areas have been subject to overgrazing, fire occurrence, agricultural disturbance, and introduction of exotic species. These disturbances have resulted in a decrease in the native forage grasses and replacement by annual grasses and weed species.

Riparian/Wetland Areas

In the Umatilla Basin's northern portion, along the Columbia and Umatilla Rivers, there are sizable wetlands some of which may be augmented by irrigation in the area. For other information on riparian/wetland areas applicable to all basins, see the general basin description in the John Day Basin section.

Columbia Basin Shrub-Steppe

The Columbia Basin shrub-steppe vegetative type once covered vast areas of Umatilla and Morrow counties in Oregon, as well as sizable parts of Washington state. This type consists of nearly level to moderately rolling grasslands with some scattered shrubs, brushy draws, and streams bordered by trees and rim-rocks.

The steppe has three relatively distinct vegetation communities:
- Big sagebrush/bunchgrass
- Antelope bitterbrush/needle-and-thread
- Bluebunch wheatgrass grasslands

Basin big sagebrush is the major shrub species; antelope bitterbrush is another important shrub. Important grasses include bluebunch wheatgrass, Idaho fescue, and needle-and-thread. Most plant communities have varying amounts of cheatgrass.

Soils in the Columbia shrub-steppe habitat are sandy, loamy sands, or sandy loams. Dune type topography is exhibited in some areas, especially where soils are very sandy and vegetation is sparse or non-existent.

Over the years, much of the area that had Columbia Basin shrub-steppe has been converted to agricultural production. The Hermiston-Irrigon-Boardman area is predominantly used for irrigating a variety of agricultural crops due to easy availability of water from the Columbia River. This tri-city area is continually growing. Farther away from the river, large acreages are dryland farmed, primarily for wheat. Other sizable acreages once in Columbia Basin shrub-steppe have been converted to urban, industrial, and rural residential uses.

As a result of these various uses, relatively little Columbia Basin shrub-steppe remains (Figure 3-6), with percentages of remaining shrub-steppe ranging from less than 1 percent for bitterbrush/needle and thread to almost 50 percent of big sagebrush/bunchgrass. The remaining shrub-steppe is in scattered small-to-medium size parcels, and some is in poor condition due to past livestock grazing practices. Native grasses have been replaced by cheatgrass, other annual grasses, and weeds.

During approximately the past 10 years, considerable acreage of dryland farm ground was placed under the Conservation Reserve Program, a federal program administered by the Natural Resources Conservation Service (formerly Soil Conservation Service) to provide incentive to protect the integrity of fragile soils. The program required discontinuance of farming for a specified time and seeding of fields to a grass mixture. Although many of these seedings have established and been successful in accomplishing their purpose of soil protection, these areas were seeded with non-native grasses and forbs and are no longer true Columbia Basin shrub-steppe.

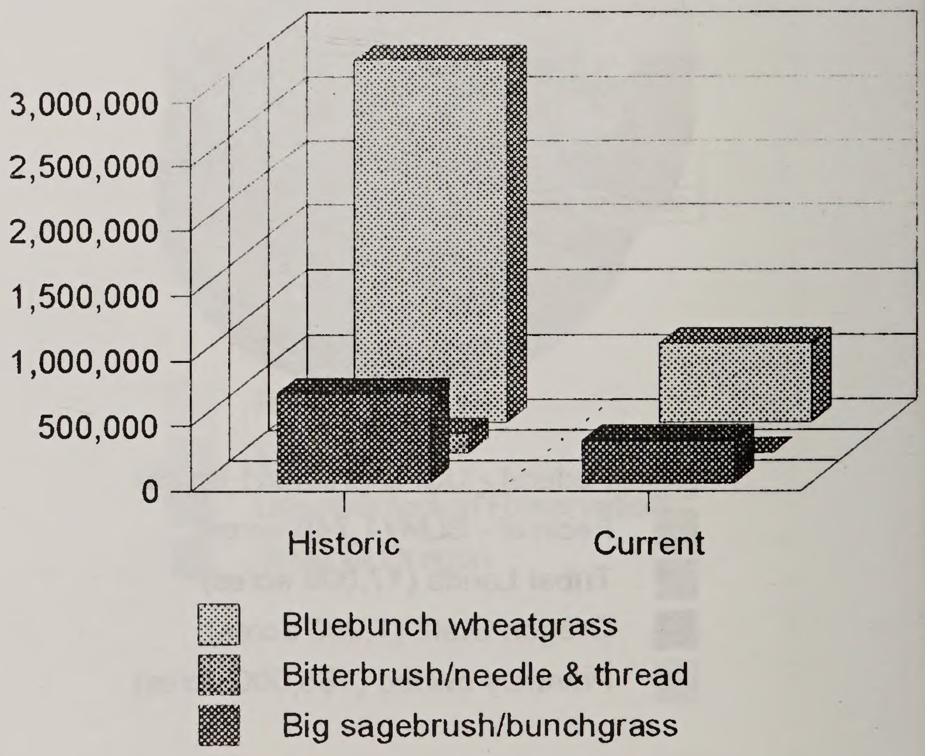
Wildlife and Fisheries

Wildlife Habitat

The two major wildlife habitat types in the Umatilla Basin are coniferous forestlands and rangelands/ Columbia Basin shrub-steppe/grasslands. Much of these two habitat types have been affected by past livestock grazing practices; agricultural/urban conversion has also affected much of the shrub-steppe.

Wildlife species typically associated with coniferous forestlands are listed in the John Day Basin section. Relative species use of three habitat types

Figure 3-6. Historic and Current Acreage of Columbia Shrub-steppe Grasslands in Umatilla Basin.



that are prominent in the Columbia Basin Province is shown on Table 3-9.

Some vertebrate wildlife species commonly inhabiting the Umatilla Basin during part or all of their life cycles are:

- _Amphibians_: Long-toed salamander, western toad, and Pacific tree frog.
- _Reptiles_: Western fence lizard, sagebrush lizard, short-horned lizard, wandering garter snake, gopher snake, western rattlesnake, and painted turtle.
- _Birds_: Northern harrier, red-tailed hawk, short-eared owl, western meadowlark, horned-lark, mourning dove, common nighthawk, Brewer's sparrow, barn swallow, and green-tailed towhee.
- _Mammals_: Long-eared myotis, little brown myotis, mountain cottontail, black-tailed jackrabbit, Townsend's ground squirrel, northern pocket gopher, bush-tailed woodrat, sagebrush vole, long-tailed weasel, badger, mule deer, and coyote.

For a list of species that inhabit the old-growth habitat in the Umatilla River Basin, see the John Day section.

Rangelands interspersed with wetland/riparian areas provide more suitable habitats for most species, even those found in more arid environments such as burrowing owls, loggerhead shrikes, sage sparrows, and sage thrashers. Although typically occupying only small percentages of the total landscape, riparian/wetland areas are used by wildlife at a much higher rate than adjacent uplands. The higher utility rate of the riparian/wetlands is due to the presence of dependable water, the woody vertical structure that often develops, their diverse plant composition, a continued greeness through the growing season, and an abundant insect life associated with these areas.

Special Status Wildlife Species

Wildlife species of concern that inhabit Columbia Basin Shrub-Steppe habitat are:

- Short-horned lizard
- Northern sagebrush lizard
- Washington ground squirrel
- Pygmy rabbit
- White-tailed jackrabbit

Bird species of concern inhabiting Columbia Basin Shrub-Steppe are:

- Grasshopper sparrow
- Oregon vesper sparrow
- Long-billed curlew
- Burrowing owl
- Upland sandpiper
- Loggerhead shrike

The upland sandpiper, Washington ground squirrel, pygmy rabbit, and white-tailed jackrabbit are either

Table 3-9. Usage Levels of Selected Communities Regularly Used by Native Species of Herptiles, Birds, and Mammals in the Columbia Basin Province.[1]

Species Type Type	Total Using Province	Sagebrush Steppe	Riparian Areas	Marsh Areas
Columbia Basin Province				
Herptiles	25	70%	27%	27%
Birds	215	20%	40%	40%
Mammals	58	47%	31%	31%
Total	298			

[1] Excludes irregular and accidental species.

Source: Puchy 1993

uncommon or rare. Short-horned lizards can be found in areas of sandy soil.

Species of concern in riparian/wetland areas are:
- *Amphibians and Reptiles*: Spotted frogs, painted turtle, tailed frog, western toad, and woodhouse toad.

Species of concern in forested areas are:
- *Birds*: Vaux's swift, great gray owl, Lewis' woodpecker, and American pine marten.

Also, see Appendix B, Table B-3, for a list of special status species known or thought to occur in the NOALE area.

Fisheries

The Columbia River is an anadromous basin, and the Umatilla and Walla Walla rivers are Mid-Columbia anadromous tributaries. Willow Creek, another major Columbia tributary in this basin, is not anadromous because of hydropower/irrigation dams.

Fish species inhabiting these rivers are:
Columbia River and its Umatilla tributaries:
- Rainbow trout
- Bull trout
- Summer steelhead trout
- Spring chinook salmon

Walla Walla River:
- Rainbow trout
- Bull trout
- Summer steelhead

Willow Creek and its tributaries:
- Rainbow trout

Special Status Fish Species

Three special status fish species occur, or potentially occur, in the Umatilla Basin: the bull trout (Proposed Threatened), the Mid-Columbia steelhead trout (Candidate), and the margined sculpin. Information specific to the listing status of the two trout species is included in the John Day general basin description.

The margined sculpin (*Cottus marginatus)*, a State of Oregon sensitive species, inhabits the Walla Walla River, Umatilla River, and Willow Creek. This species does not occur on BLM-managed lands in either Umatilla River or Willow Creek, but has been found in both the South and North Fork Walla Walla River, likely on BLM-managed lands (Jim Phelps, ODFW Biologist, pers. comm. 1997). The BLM is considering future acquisition of some land adjacent to parcel UM40, along the North Fork Walla Walla River.

Cultural and Paleontological Resources

Cultural Resources

Occupation of the Columbia Plateau area dates from 12,000 years ago, when highly mobile, foraging groups hunted large game and utilized a broad array of resources found in the region. Archaeological evidence for this early period suggests that low elevation rivers and wetlands were occupied year round, with seasonal use of upland environments.

During thousands of years that followed, subsistence strategies and community settlement shifted toward more specialized and complex patterns. People emphasized procurement of reliable and storable resources, such as anadromous fish and an impressive suite of edible roots, berries, and industrial and medicinal plants. A semi-sedentary pattern emerged for winter community occupation along major rivers and lowlands;small independent groups dispersed or congregated to secure resources when they became seasonally available in the plateaus and uplands. Many tribes gathered at locations of resource abundance for events such as root festivals, interior fish runs, or communal game drives. These traditional economic, social and land use patterns were dramatically altered during the recent historic period.

Historic records indicate the Umatilla Basin was mostly utilized by the Umatilla, Cayuse, Walla Walla, and Tenino tribes. Winter camps were located on rivers and drainages from the foothills to the Columbia River; mountainous regions were important for fishing, hunting, root gathering, raw material procurement and travel. Cultural resources reflecting these land uses would be multiple occupation lithic scatters with features, small task specific lithic sites, pithouse villages, rock structures (such as cairns, pits, walls or monuments), rock art, quarry locations, trails, and spiritual sites.

Beginning with Lewis and Clark's expedition down the Columbia River in 1804, EuroAmerican explorers and fur traders maintained economic relations with the tribes of the region during the early 19th century. From the 1840s to 1860s, emigrants traveled the Oregon Trail across the Umatilla plains, heading to the Willamette Valley. Settlers later took up land claims for towns, homesteads, cattle and sheep ranches, and farms. Rail and river transportation, coupled with irrigation projects, faciliated the expansion of the wheat, agricultural and logging industry important today in the Umatilla Basin. Representative historic sites for the basin are the remains of wagon trails, emigrant camps, homesteads, livestock driveways, agricultural features and logging camps.

Traditional Use: In 1855, treaties were executed and subsequently ratified with the Umatilla, Walla Walla, Cayuse, Tenino, and Nez Perce. These tribes and the Northern Paiute have current and traditional cultural interests in the region.

Paleontological Resources

Geological formations in the Umatilla River Basin preserve a rich record of mammalian faunas representing middle and late Cenozoic time, from the Pleistocene age, back about 15 million years to the middle Miocene. That interval witnessed major landscape and climatic changes and a continuously changing array of vertebrate faunas. Mammalian fauna represented in the fossil record on BLM-administered lands includes Miocene horses, rhinos, peccaries, camels, beavers, and highly diverse rodents, and other small mammals. There are wide arrays of localities providing vertebrate associations, but most are geographically scattered, which hinders stratification to establish their period of occurrence.

A few areas along the crest of the Blue Mountains in Morrow County have potential for scientifically significant fossils. These areas have Herron, Clarno, and John Day formations exposed at the surface. A west to east band of Tertiary age and younger sediments with some known paleontological sites are also exposed along the Umatilla bench.

Socioeconomics

The population of the Umatilla Basin is concentrated in the cities of Pendleton and Hermiston and nearby areas. Numerous smaller towns and villages are scattered throughout the basin, including Milton-Freewater, Boardman, and Heppner. There is a relatively high density of rural homes and farms in the lower Umatilla Valley and adjacent area.

Agriculture and ranching represent a large part of the economy in the Umatilla Basin; other activities important to the area's economy are railroad transportation; barge traffic and water-related recreation on the Columbia; food processing; and light industry. The Umatilla Army Depot is another important economic factor.

Private Lands Considered for Acquisition in Umatilla River Basin

To date, one parcel of approximately 840 acres of private land along the North Fork Walla Walla River in the Umatilla River Basin has been identified for potential acquisition by BLM in future transactions (Appendix A, Table A-2). To acquire this property, the BLM must exchange several parcels in this vicinity. These parcels have been identified as retention parcels in Alternative 3. Therefore, if this alternative is selected, the BLM would forgo this acquisition. Because this property is in future transactions, field inspections have not been done. If the property becomes available, a site-specific environmental assessment, tiered to this EIS, will be prepared.

Resources on Potential Acquisition Lands in Umatilla River Basin

Vegetation

Forestlands

According to U.S. Geological Survey maps, approximately 450 acres of the potential acquisition lands in the Umatilla Basin are forestlands. Forested areas include the steep north slopes above the North Fork Walla Walla River, as well as some side drainages. The major species on potential acquisition lands is Douglas-fir, with some white fir and spruce. Ponderosa pine may be expected in south facing side draws. Forest stands range between 10 and 95 acres; the average stand size is 32 acres.

Large Tree Component: No site-specific inventory has been done because the area is in future transactions. However, large trees are present on nearby BLM-managed parcels and could also occur here.

Rangelands

Rangelands occupy steep, south-facing slopes above the North Fork Walla Walla River. The major grass species is bluebunch wheatgrass, except on the more northerly aspect slopes which are dominated by Idaho fescue. Rangeland acreage on the potential acquisition property totals approximately 390 acres.

Riparian/Wetland Areas

The potential acquisition area in the Umatilla Basin includes approximately 2.5 miles of the North Fork Walla Walla River, 0.5 mile river frontage on one side, and 3.8 miles of intermittent side drainages. The streamside riparian acreage totals approximately 17 acres.

Special Status Plant Species

Because the potential acquisition area is in future transactions, no information is available on the presence of Special Status Plants.

Wildlife and Fisheries

Wildlife Habitat (Including Special Status Species)

The potential acquisition area has a mixture of forest, range, and riparian habitats. Species expected to inhabit these areas include elk, deer, bear, cougar, grouse, and a variety of songbirds.

Lewis' woodpecker, pileated woodpecker, and American pine marten are special status species that could be expected to inhabit potential acquisition areas in the Umatilla Basin (Appendix B, Table B-3).

Fisheries (Including Special Status Species)

Steelhead and bull trout are important fish species known to occur in the North Fork Walla Walla River. No special status fish species are known to occur in potential acquisition areas identified to date in the Umatilla Basin.

Recreation

Recreational Values and Opportunities: The acquisition lands being considered in the Umatilla Basin have potential for several dispersed recreational opportunities, including fishing, hunting, hiking, and sightseeing.

Access: Legal access to the east of the potential acquisition lands is by trail from the adjacent Umatilla National Forest. From the west, vehicle access is via a road up the river; however, this is not legal access and is usually precluded by a locked gate.

Visual Resources

The potential acquisition property may rate as Visual Resource Management Class II due to its variety of landform and the presence of the river. (See glossary for general management guidelines of VRM classes.)

Soils

Soils on the potential acquisition property are expected to be similar to those on nearby BLM-managed parcels, which are mostly shallow with a high or moderate-to-high erosion potential.

Cultural and Paleontological Resources

Cultural Resources

Although no site-specific information is available, the U.S. Geological Survey map indicates at least four buildings of unknown condition or historical significance exist on the property.

Paleontological Resources

No site-specific information is available.

Timber Resources

The acreage and volume of commercial forests on potential acquisition lands in the Umatilla Basin are unknown at this time. Timber cruises will be completed and available prior to making decisions on this acquisition.

Livestock Grazing

It is presumed that the potential acquisition property is grazed by livestock, the intensity, season of use, and management system of which are unknown. However, assuming an average of 8 acres per AUM, the property would be capable of producing 105 AUMs of livestock forage.

Public Lands Considered for Disposal in Umatilla River Basin

Approximately 7,157 acres of BLM-managed lands in the Umatilla River Basin are proposed for disposal (Appendix A, Tables A-1a and A-1b). This land is scattered in 69 parcels, ranging in size from 5 acres to 2,798 acres in Umatilla and Morrow Counties.

Resources on Potential Disposal Lands in Umatilla River Basin

Vegetation

Refer to the Resource Assessment in Appendix A (Table A-7) for vegetative types and acreages by specific parcel.

Forestlands

The Umatilla Basin potential disposal lands identified to date include approximately 707 acres of forested lands on 21 parcels. Of this acreage, about 324 acres have been harvested and are in early-to-mid seral stage of development. Although Douglas-fir is the dominant coniferous species on forestlands in the basin as a whole, the BLM-administered lands proposed for disposal are at lower elevations which are predominantly forested with Ponderosa pine.

Four types are represented on the potential disposal parcels:

- Ponderosa pine - On 280 low elevation acres on south aspects and ridgetops. Juniper and Douglas-fir may be encroaching on some of these sites.

- Douglas-fir - On 96 acres in three stands on low elevation north aspects along very steep areas of the North Fork Walla Walla River. Other species present include white fir and spruce.

- White fir - On 130 acres of the North Fork Walla Walla River drainage. Stand composition also includes Englemann spruce, Douglas fir, and western larch.

- Mixed conifer - On lower elevations along streams on 201 acres. These stands include white fir, Douglas fir, Englemann spruce, western larch, and minor amounts of ponderosa pine.

Large Tree Component: Approximately 400 acres on 14 BLM-administered forested parcels identified to date for disposal in the Umatilla Basin contain large trees at various stocking levels (Appendix A, Table A-5). This acreage represents 55 percent of BLM's forested lands having large trees in the basin. Species composition by acreage on this forested acreage is as follows:

• Ponderosa pine:	151 acres
• Douglas-fir:	71 acres
• White fir:	90 acres
• Mixed conifer:	112 acres

(Refer to the Resource Assessment in Appendix A, Table A-7 for large tree acreage on specific parcels.)

Rangelands

This section primarily addresses the 24 potential disposal parcels in the Umatilla Basin likely to be used for agricultural production and industrial, rural residential or other similar uses after the exchange (Appendix A, Table A-6).

Agricultural use is currently occurring on three parcels (M26, M28, and UM32) under a land use permit; this use presumably would continue under private ownership. Of the remaining 21 parcels, 16 have never been farmed and the vegetation present is "natural." Vegetation on most of these parcels, especially those near Hermiston, is primarily sagebrush-cheatgrass. Most parcels also have some remnant bluebunch wheatgrass and needle-and-thread grass. A very few, most notably UM20 and the unfarmed portion of M26, have relatively good stands of native perennial grasses. UM17 and 18 also have relatively intact rangeland communities.

Portions of five parcels (UM36-38, UM64, and UM75) were previously farmed, but this use was discontinued some years ago. Two parcels (UM64 and 75) were not seeded and were allowed to revegetate naturally; vegetation on these two parcels is primarily cheatgrass and other annual species. Relatively small portions of these two parcels were farmed. The remaining three parcels (UM36-38) were seeded to grass along with adjoining private land in accordance with Conservation Reserve Program requirements.

Riparian/Wetland Areas

The potential disposal tracts identified to date in the Umatilla Basin have approximately 9 miles of perennial streams, including both fish and non-fish bearing, and 36-63 acres of associated riparian habitat. (Tables 3-10 and 3-11).

In addition, one potential disposal site (UM35) has an estimated 15 acres of wetland that was created largely by beavers. This area equates to approximately 40 acres of riparian/wetland vegetation, or less than 0.6 percent of the acreage proposed for disposal. Refer to the Resource Assessment in Appendix A (Table A-7) for a list of parcels that have streams and associated riparian zones.

Many of these riparian areas are in poor condition due to past livestock grazing practices along streams. These areas are difficult to manage due to their small size, short reaches, and lack of access.

Five parcels (UM40 and 43-46) are examples of forested parcels dissected by streams. The riparian zone of UM40, located on the North Fork of the Walla Walla River, is below its potential due to trampling and heavy grazing by livestock; this parcel also has a road passing through it. Tracts UM43, 44, and 46, all located on very steep slopes, are in relatively good condition and near their potential. Five other forested tracts (UM10-13 and 39) have small stream reaches and associated riparian zones.

Rangeland tracts such as UM35 (w/series of wetlands created by beavers) and UM75 (in the Juniper Canyon Area and totaling 2,850 acres) have free-flowing water during most years; these tracts have the only free-flowing water for many miles. UM75 borders Juniper Canyon and its riparian zone for over 2 miles, and also has several springs. The riparian zone of this parcel is heavily impacted by cattle grazing.

Tract UM28 (160 acres) has a concrete irrigation ditch running through it. This parcel does not have a true riparian zone, but the flowing water and adjoining irrigated cropland may attract some species associated with riparian areas.

Parcel UM26 near the town of Hermiston has a man-made pond (actually an irrigation ditch overflow area) that has intermittent water. This parcel's riparian area is a narrow strip around the perimeter consisting of blackberry, willow, cottonwood, and Russian olive, as well as sedges and grasses.

Columbia Basin Shrub Steppe

Historically, most of the BLM-administered "rangeland" parcels considered for disposal had large acreages in Columbia Basin shrub-steppe or grassland vegetation. Approximately 5,200 acres on 33 parcels are within the Columbia Basin shrub steppe/grassland ecotype. Currently, only 100 acres on 3 of these parcels retain the major plant components of this vegetation type.

The remaining acreage (approximately 5,100 acres) is in poor ecological condition. Among the parcels in good condition is UM19 (40 acres) on North Service Butte, which contains native shrub-steppe vegetation such as basin big sagebrush, bluebunch wheatgrass, Idaho fescue, and needle

Table 3-10. Fish Habitat on Public Lands Considered for Disposal in Umatilla Basin.[1]

Drainage Subbasin and Stream	Tract No.	Disposal Miles	Chinook Salmon	Steelhead Trout	Bull Trout	Rainbow Trout
Umatilla						
Butler	UM10	0.32				X
Columbia						
Juniper Canyon	UM35/75	2.30				Historic?
Willow/Columbia						
Sperry	M 8	0.25				Historic?
Sawmill	M12	0.02				X
Subbasin Total		0.27				
Walla Walla						
North Fork Walla Walla	UM40	0.40	Historic	X	X	X
North Fork Walla Walla	UM 45	0.30				X
North Fork Walla Walla	UM43,44, 46	1.15				
South Fork Walla Walla	UM69	0.01	Historic	X	X	X
Subbasin Total		1.86				
Total		**4.75**		**0.41**	**0.41**	**1.07**

[1] Willow Creek and Walla Walla River flow into the Columbia River, but are included in Umatilla Basin for analysis purposes in this EIS.

Table 3-11. Non-Fish Bearing Streams on Public Lands Considered for Disposal in Umatilla Basin.[1]

Subbasin Miles	Perennial Stream Stream Miles	Non-Perennial (Perennial and Non-Perennial)	Total Miles
Umatilla River	0.30	2.80	3.10
Walla Walla River	1.30	1.15	2.45
Columbia River	2.50	2.00	4.50
Willow Creek	0.25		0.25
Totals	**4.35**	**5.95**	**10.30**

[1] Willow Creek and Walla Walla River flow into the Columbia River, but are included in the Umatilla Basin for analysis purposes in this EIS.

and thread grass. UM17 (40 acres) is still dominated by native grassland-bluebunch wheatgrass and Sandberg's bluegrass. On UM20 (160 acres) in Warner Butte, remnants of native plant communities can be found on portions of the parcels.

Other parcels, primarily the uplands along the Columbia River, have been severely degraded. Soils in these parcels are very sandy and dominated by a cheatgrass understory, a Basin big sagebrush overstory, and an abundance of non-native species. Among the parcels that have lost most of their native vegetation are the following 12 parcels: UM25, 27, 29-36, 68, and 75.

Nearly all of Parcel M28 (129 acres) and a small portion of UM32 (10 acres) are currently being farmed, which has replaced native vegetation with agricultural crops. Portions of five parcels (UM36-38, UM64, and UM75) totaling 200 acres were farmed at one time, but this use was discontinued several years ago.

Special Status Plant Species

No Federal/state-listed or BLM sensitive plant species are known to occur on any of the BLM-administered tracts considered for disposal, to date, in the Umatilla Basin. Potential disposal lands contain three plant species for which BLM and the Oregon Natural Heritage Program are collecting data to evaluate their distributions and status: transparent milkvetch (*Astragalus diaphanus* var. *diaphanus*), stalked-pod milkvetch (*Astragalus sclerocarpus*), and crouching or Columbia milkvetch (*Astragalus succumbens*). Only the populations of *A. sclerocarpus* and *A. succumbens* on parcels UM20 and UM21 are of sufficient size to represent manageable populations. These three species are also known from other private and Federal lands in Morrow and Umatilla counties.

Wildlife and Fisheries

Wildlife Habitat

Rocky Mountain elk, mule deer, black bear, various cavity nesters, grouse, and a variety of song birds could be expected on many of the forested parcels.

Most rangeland parcels are occupied by numerous songbirds, including meadowlarks, horned larks, mourning doves, and magpies.

One parcel (UM35) has an area of wetland and associated species, including beaver, muskrat, rattlesnake, frogs, red-winged blackbirds, sandpipers and other shore birds, and mallards.

Refer to the Resource Assessment in Appendix A, Table A-7 for parcel-specific wildlife habitat information.

Old-Growth Habitat

Based on the characteristics for old-growth habitat described under the John Day Basin general description, all of the 424 acres of large trees described in the Forestlands section are considered to be old-growth wildlife habitat. Refer to the Resource Assessment in Appendix A (Table A-7) for acreage by specific parcel.

Special Status Wildlife Species

Two special status species (both BLM Sensitive) may occur on potential disposal parcels in the Umatilla Basin: pileated woodpecker and long-billed curlew. Pileated woodpeckers could be expected on several of the forested parcels, and long-billed curlews could be found on several of the rangeland parcels.

Refer to the Resource Assessment in Appendix A (Table A-7) for information specific to possible occurrence of special status species by specific parcel, and to Appendix B (Table B-3) for a composite list of special status wildlife species that could occur in the NOALE area.

Fisheries

Approximately 5 miles of fish-bearing streams are within the potential disposal parcels in the Umatilla Basin (Table 3-10). These fish-bearing segments are scattered and non-contiguous on 11 tracts of public land, and according to field reviews range from poor to good condition. Chinook salmon, steelhead trout, bull trout, rainbow trout, and a variety of non-salmonid species can be found in some of these stream segments.

Two tracts (UM35 and UM75) in Juniper Canyon, which is a shrub-steppe region, flow directly into the Columbia River. The only fish presently in Juniper Canyon are dace and other non-game fish. Historically, however, the creek may have supported rainbow trout and possibly steelhead.

Willow Creek and the Walla Walla River flow into the Columbia River, but are included in the Umatilla Basin analysis area as they are shown on the same Oregon State Water Resources river map.

Special Status Fish Species

Bull trout, a candidate species, is found on two potential disposal sites (UM40 in the North Fork Walla Walla and UM69 in the South Fork Walla Walla).

Recreation

Recreational Values and Opportunities

The isolated nature of the potential disposal lands limits their recreational opportunities for the general public. On parcels having public access, the predominate activity is dispersed recreation including hunting, fishing, sightseeing, off-highway vehicle use, horseback riding, and hiking. These activities are limited by access.

Access

Because the potential disposal lands are small, isolated parcels intermingled with private land, the majority do not have legal access. Of the 69 parcels of BLM-managed lands being considered for disposal in the Umatilla Basin, 48 parcels representing 83 percent (6,000 acres) of the total disposal acreage do not have legal access.

The other 21 potential disposal parcels have some legal access. Fourteen parcels are accessible by public road or highway. Most of these are in the Hermiston area where there is a high density of county roads, and several of the parcels are bordered by roads on at least one side. The other seven parcels are accessible, but not necessarily by vehicle, by being adjacent to National Forest or Army Corps of Engineer land that has access.

Refer to the Resource Assessment in Appendix A (Table A-7) for access by specific parcels.

Visual Resources

All of the potential disposal lands in the Umatilla Basin are within Visual Resource Management Class III, the objective of which is to partially retain the landscape's existing character. (See glossary for information on management guidelines specific to VRM classes.)

Soils

Soils on most of the parcels identified for potential disposal in the Umatilla Basin are generally sandy, sandy loam, and loamy sand. These soils are shallow to deep, are excessively drained or well drained, and usually have a slight-to-moderate water erosion hazard but a high hazard of wind erosion and soil blowing.

Soils on parcels UM38 and UM64 have a more loamy texture and are less susceptible to wind erosion, but have a higher water erosion hazard.

Three parcels (UM25, UM26, and UM67) have a considerable rock outcrop component that makes portions of these parcels unsuitable for housing or industrial type use.

Refer to the Resource Assessment in Appendix A (Table A-7) for erosion hazards on specific parcels.

Prime/Unique Farmlands

Portions of the following six parcels meet the soil requirements for prime farmland when irrigated: UM18, UM20, UM21, UM24, UM27, and UM67. It is assumed that, after the exchange, three of these parcels (UM18, UM20, and UM21) would be used for agricultural purposes, and the other three (UM24, UM27, and UM67) for industrial, housing, or similar uses.

Cultural and Paleontological Resources

Cultural Resources

To date, 33 of the 69 potential disposal tracts of BLM-administered lands within the Umatilla Basin have been intensively surveyed for this land exchange. Cultural resources located on five parcels include small lithic scatters, a stone feature, a 1930s logging camp area, homestead remains and early 20th century irrigation features. These sites have not yet been evaluated against National Register criteria. There are no Oregon Trail properties or currently listed National Register properties on lands proposed for exchange.

Traditional Use: Historic records and other sources identify traditional gathering, hunting, and fishing stations for the Umatilla, Cayuse, and Walla Walla along the Umatilla and Walla Walla rivers, as well as along the Columbia. Eight upland BLM tracts (560 acres total) are located in the steep canyons of the upper Umatilla and Walla Walla Rivers, one including 0.5-mile of river frontage. Fifteen isolated tracts (including Juniper Canyon) are adjacent to the Columbia River canyon or lower Umatilla River, where winter villages were strategically situated near important resources and travel routes.

Paleontological Resources

Although some BLM-administered parcels proposed for disposal have geologic formations with potential for scientifically significant fossils, no known sites occur. Five parcels near Heppner (one in Sand Hollow, two parcels south of Hermiston, and the two Juniper Canyon parcels) are worthy of further study. These five parcels have rocks derived from ash or lake deposits and are within areas mapped as geologically and paleontologically interesting. Field checks are planned for these parcels.

Timber Resources

The 707 acres of forested lands considered for disposal to date in the Umatilla Basin are commercial forestlands. Forest stands range in size from 10 to 95 acres, and the average stand size is 32 acres. Of the 707 acres, the 71 acres of Douglas-fir are considered economically inoperable for harvest by Federal standards because of their adverse location designations in the Operations Inventory.

Ten parcels totaling 324 acres have had one or two commercial entries in the past 45 years. These stands are now in an early-to-mid seral stage of development.

Timber cruises on these forested stands have not been completed at this time, but will be complete and available prior to exchanging these forested lands.

Livestock Grazing

There are grazing leases with a total of 442 AUMs on 33 potential disposal parcels in the Umatilla Basin. Refer to the Resource Assessment in Appendix A (Table A-7) for AUMs by specific parcels.

Most of the leased parcels are isolated tracts surrounded by private ownership. A few border National Forest land. All of the parcels are under Custodial management, meaning the BLM does not specify actual use (see glossary for additional information on Custodial).

Description of Grande Ronde Basin

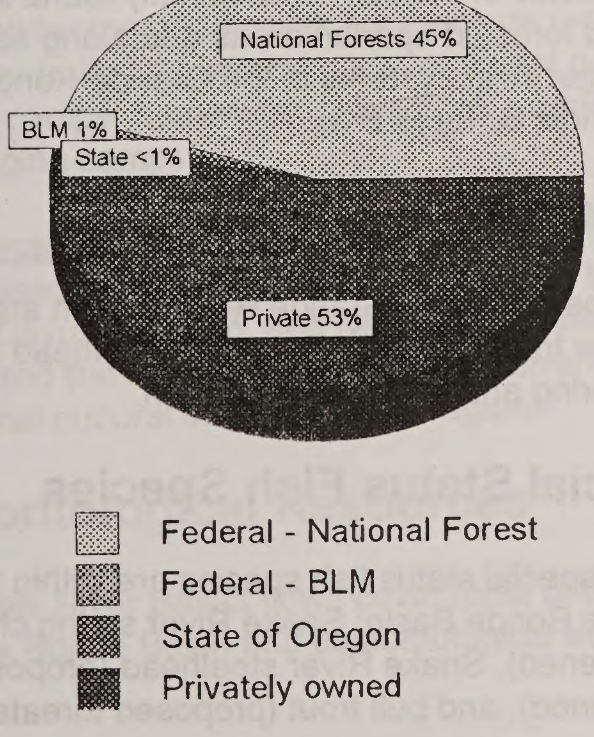
Introduction

The Grande Ronde Basin encompasses approximately 2.5 million acres (Figure 1-2). It extends from the eastern crest of the Blue Mountains on the west, northeastward across Union and Wallowa Counties, to the Idaho and Washington state boundaries.

This basin is within the Blue Mountain physiographic province, which is described at the beginning of Chapter 3 (Figure 1-3).

About 45 percent of the land in the Grande Ronde Basin is National Forest (Figure 3-7). Approximately 1 percent is public land administered by the BLM, and an even smaller percentage is administered by the State of Oregon. The remainder is private land, including some major holdings of private forestland, as well as agricultural and rangeland.

Figure 3-7. Land Ownership in Grande Ronde Basin.



Geology/Water/Soils/Air

The basin is formed from the slopes of two rugged mountain ranges (Blue Mountains to the east and northwest, and Wallowa Mountains on the southeast) and two major river valleys (Grande Ronde and Wallowa, approximately 230,400 acres and 160,000 acres, respectively).

Topography in the Grande Ronde Basin ranges from steep alpine mountains, reaching 10,000 feet elevation in the Wallowa mountains, to deeply dissected plateaus and canyons, and broad, gently rolling valleys.

The mainstem Grande Ronde River extends 212 miles from the Blue Mountains to its confluence with the Snake River in Washington, 168.7 miles upstream from the confluence of the Snake and Columbia Rivers. Other major water systems in the Grande Ronde Basin include the Minam, Wallowa, Lostine, and Wenaha rivers, and Catherine and Joseph creeks.

Soils in the Grande Ronde Basin can be classified into four general groups:

- Floodplains, terraces, and fans: *Formed in alluvial and lacrustine deposits. Are moderately deep to deep and poorly to well drained, with textures including silt loam and silty clay loam. These soils display a slight hazard from water erosion. Flooding and ponding are common in winter and spring.*
- Terraces, fans, and upland slopes: *Formed in alluvial, eolian, and lacrustrine deposits and in residuum and colluvium derived from basalt and volcanic tuff. Are moderately deep to deep and well drained, with textures including sandy loam, silt loam, and silty clay loam. These soils display a slight-to-moderate hazard from water erosion.*
- Dry foothills: *Formed in colluvium and residuum derived from basalt and volcanic tuff, generally adjacent to timbered areas, but at lower elevations. Are shallow to moderately deep and well drained, with textures of extremely stony loam to silty clay loam. These soils display a slight-to-high hazard from water erosion.*
- Forested uplands: *Formed in colluvium and residuum derived from basalt and volcanic tuff and recent volcanic ash. Are moderately*

deep to deep, moderate-to-well drained, with textures of very stony silt loam and silt loam. These soils display a slight-to-high hazard from water erosion.

Temperatures and precipitation vary with elevation. Average annual precipitation ranges from 12 to 23 inches at lower elevations in the valleys, and from 40 to 50 inches in the higher mountains.

Vegetation

Forestlands

Within the Upper Grande Ronde Basin, there are approximately 2,860 acres of forested lands managed by the BLM. These lands account for less than one percent of the total forested ownership in the Upper Grande Ronde Basin. These forested sites are similar to those in the Umatilla Basin, with Douglas-fir being the most common coniferous species. Spruce/fir associations are found at higher elevations, and ponderosa pine type at the lower elevations.

Large Tree Component: Approximately 680 acres of the forestlands managed by the BLM in this basin have large trees.

Rangelands

Rangelands in the Grande Ronde Basin are comprised of sagebrush/grassland steppe and grassland steppe.

The sagebrush/grassland steppe is dominated by bluebunch wheatgrass on ridgetops, hilltops, and south-facing slopes and Idaho fescue on the north-facing slopes. Varying amounts of Wyoming big sagebrush and basin big sagebrush occur depending on landscape position, soils, and parent material.

The grassland steppe is dominated by Idaho fescue with lesser amounts of bluebunch wheatgrass and a shrub component that includes chokecherry, hawthorn, snowberry, serviceberry, elderberry, and mock orange in randomly distributed patches on deep north-slope sites. South-slopes are dominated by bluebunch wheatgrass with minor amounts of Idaho fescue and a variable bitterbrush component.

Riparian/Wetland Areas

As in the other basins, riparian or wetland areas occupy a very small part of the total land area and most are narrow strips along small streams. Ladd Marsh in the southern portion of the Grande Ronde Valley is an example of a sizeable wetland area; this area is not within BLM-administered lands and is listed here for reference purposes only.

Wildlife and Fisheries

Wildlife Habitat

Coniferous forests comprise most (approximately two-thirds) of the native vegetation habitat for wildlife in the Grand Ronde Basin and rangeland habitat comprises the remainder.

Refer to the John Day Basin Wildlife Resources section for a listing of some of the vertebrate species associated with forest type, including old-growth forests.

The rangeland habitat is a mixture of sagebrush-steppe and grassland. The sagebrush-steppe in this basin is more similar to that in the Powder Basin than the Columbia Basin shrub-steppe in the Umatilla Basin. This sagebrush-steppe type is important to more than 100 vertebrate species (Thomas 1979 and 1986).

Special Status Wildlife Species

There is wintering bald eagle habitat on BLM-administered lands in the Grande Ronde Basin. The bald eagle, Lewis' woodpecker, and bats such as the long-eared myotis and long-legged myotis are species of concern occasionally found in and around forested riparian areas and along some of the larger river systems in the Grande Ronde Basin (Appendix B, Table B-3)

Fisheries

Fish species in the Grande Ronde Basin are rainbow trout, bull trout, summer steelhead trout, and spring and fall chinook salmon.

Special Status Fish Species

Three special status fish species are within the Grande Ronde Basin: Snake River spring chinook (threatened), Snake River steelhead (proposed threatened), and bull trout (proposed threatened).

Cultural and Paleontological Resources

Cultural Resources

The culture history of the Grande Ronde basin is broadly similar to that of the Umatilla Basin. Ethnographic and historic records demonstrate that the interior reaches of the basin were utilized most often by the Umatilla, Cayuse, Walla Walla, and Nez Perce tribes, but also by Paiute people. Wallowa Valley and the lower Grande Ronde was occupied by the Wallowa (Joseph) Band of Nez Perce prior to the 1877 Nez Perce War. Semi-permanent winter villages were located along the middle to lower river reaches in this basin. The Grande Ronde valley was a notable location for inter-tribal trade, fishing, digging camas and gathering roots. The anadromous fishery of the Grande Ronde and its tributaries played an important role in the tribal economies of the region. Valleys and interior drainages were important for grazing, hunting, plant gathering, raw material procurement, and travel. Cultural resource sites would include lithic scatters with features, rock structures, rock art, quarry locations, trails, and spiritual sites.

Between 1811 and the 1850s, explorers, fur traders, and emigrants worked and traveled through the valleys of the Grande Ronde; and by the 1860s and 1870s, towns were being established along the route of the Oregon Trail. During the late 19th and early 20th century, more land claims were taken up for homesteads, cattle and sheep ranches; and logging became a major industry for the region. Historic sites known or expected for the geographis area include remains of wagon trails and freight roads, emigrant or military camps, homesteads, livestock driveways, and logging camps.

Traditional Use: In 1855, treaties were executed and subsequently ratified with the Umatilla, Walla Walla, Cayuse, Tenino, and Nez Perce. These tribes, and the Northern Paiute, have current and traditional cultural interests in the region.

Paleontological Resources

Columbia River Basalt flows cover most of the Grande Ronde Basin and paleontological sites are rare.

Socioeconomics

Most lands within the Grande Ronde and Wallowa Valleys have been converted to agriculture and urban uses. Beyond the populated areas, the landscape is mainly rural pastureland, rangeland, and forest.

Economically important land use activities include farming, livestock production, timber production, recreation, and tourism. Some mining, primarily placer deposits, occurs in the headwaters of the Grande Ronde River and in the Wallowa Mountains.

Private Lands Considered for Acquisition in Grande Ronde Basin

To date, no private lands have been specifically identified for acquisition within the Grande Ronde Basin. Lands meeting certain criteria may be considered for acquisition during future land tenure transactions as part of the NCALE. Lands that may be considered include lands along the Wallowa and Grande rivers and their major tributaries. Refer to the Baker Resource Management Plan of July 1989 and the Wallow and Grande Ronde River Final Management Plan/Environmental Assessment of December 1993 for information and descriptions of these lands.

Public Lands Considered for Disposal in Grande Ronde Basin

Approximately 3,440 acres of BLM-managed public land in the Grande Ronde Basin are being proposed for disposal (Appendix A, Tables A-1a and A-1b). This land is in Union County and is scattered in 43 parcels, ranging in size from 40 to 320 acres.

Resources on Potential Disposal Lands in Grande Ronde Basin

Vegetation

Forestlands

Approximately 2,260 acres of forestlands (33 parcels) managed by BLM in the Grande Ronde Basin are considered for disposal. Some of these parcels have forest health concerns in varying degrees, from overstocking to severe mortality. Most of the stands on 26 of the parcels (approx. 2,000 acres) have been harvested and are now in an early-to-mid seral stage of development.

The forests are typical Blue Mountain mixed conifer stands with ponderosa pine dominating the south-facing slopes, and Douglas-fir/grand fir associations on north slopes and in narrow canyon bottoms. Nine forest types are represented, with ponderosa pine the dominant species in three types:

• Ponderosa pine (south aspects; low elevations):	326 acres
• Ponderosa pine/Douglas-fir:	471 acres
• Ponderosa pine/white fir:	34 acres
• Douglas-fir:	13 acres
• White fir:	40 acres
• White fir/larch:	262 acres
• White fir/lodgepole pine:	231 acres
• Lodgepole pine:	83 acres
• Mixed conifer:	761 acres

The mixed conifer includes white fir, Douglas-fir, larch, lodgepole pine, and Englemann spruce.

Large Tree Component: Approximately 538 acres (14 parcels) of the BLM-administered forestlands proposed for disposal in the Grande Ronde basin have large trees at various stocking levels. The species composition of this acreage is:

• Ponderosa pine:	63 acres
• Ponderosa pine/Douglas-fir:	164 acres
• Ponderosa pine/white fir:	34 acres
• White fir/larch:	53 acres
• Mixed conifer:	224 acres

Rangelands

Important grass species on most non-forested parcels are Idaho fescue and/or bluebunch wheatgrass. Sandberg's bluegrass is another important species on most parcels. Cheatgrass has invaded some of the parcels that are in poor ecological condition. Big sagebrush is the major shrub on shrub-steppe parcels. On a few parcels (including UN8, 17, 24, and 41), stiff sagebrush is the major shrub species.

Riparian/Wetland Areas

The potential disposal tracts identified, to date, in the Grande Ronde Basin have approximately 6 miles of perennial streams and associated riparian habitat, including both fish and non-fish bearing streams (Tables 3-12 and 3-13). This stream mileage equates to between 24 and 42 acres of riparian habitat.

INSERT TABLES 3-12 and 3-13

Special Status Plant Species

No Federal/state-listed or BLM Sensitive plant species are known to occur on the BLM-managed parcels being considered for disposal, to date, in the Grande Ronde Basin.

Wildlife and Fisheries

Wildlife Habitat

The potential disposal parcels identified to date in the Grande Ronde Basin have not been specifically assessed for wildlife species. The forested and rangeland tracts, however, likely have the same species described in the Umatilla Basin. Refer to Appendix B, Table B-1 for a list of wildlife species that may occur in the NOALE area.

Old-Growth Habitat

Based on the characteristics for old-growth habitat described under the John Day Basin general description, 70 of the 538 acres of disposal forestlands containing large trees are potential old-growth wildlife habitat.

Table 3-12. Fish Habitat Within Public Lands Considered for Disposal in Grande Ronde Basin.

Drainage Subbasin and Stream Name	Tract No.	Disposal Miles	Chinook Salmon	Steelhead Trout	Bull Trout	Rainbow Trout
Grande Ronde						
Pelican Creek	UN02	0.25				X
Sheep Creek	UN14	0.50	X	X	X	X
Meadow Creek	UN63	0.40	X	X		X
Dark Canyon	UN64	0.30	X	X		X
Subbasin Total		1.45				
Catherine Creek						
Shaw Creek	UN16	0.60				X
Potters Creek	UN25 & UN26	0.50		X		X
Scout Creek	UN39	0.30		X		X
South Fork Catherine Creek	UN44	0.30	X	X	X	X
Subbasin Total		1.70				
Total Miles		**3.15**	**1.50**	**2.30**	**0.80**	**3.15**

Legend:
X = Yes, presence of fish habitat

Table 3-13. Non Fish-Bearing Streams on Public Lands Considered for Disposal in Grande Ronde Basin.

Subbasin	Perennial Stream miles	Non-Perennial Stream Miles	Total Miles (Perennial and Non-Perennial)
Grande Ronde	3.1	2.25	5.35

Special Status Wildlife Species

The potential disposal parcels in this basin have not yet been specifically assessed for special status wildlife species. Refer to Table B-3 for a listing of special status wildlife species that may occur within the analysis area.

Fisheries (Including Special Status Species)

Approximately 3.15 miles of fish-bearing streams are within the potential disposal parcels in the Grande Ronde Basin (Table 3-12). These fish segments range from 0.3 to 0.6 miles in length, are scattered and non-contiguous on 9 tracts of public land, and according to field review are in poor condition. Chinook salmon, trout (steelhead, bull and rainbow), and a variety of non-salmonids can be found in some of these stream segments.

Recreation

Recreational Values and Opportunities: Although recreational use is possible on parcels that have public access, the small size of most potential disposal parcels limits their recreational opportunities. These opportunities consist of dispersed use, such as limited hunting, fishing, sightseeing, off-highway vehicle use, horseback riding, and hiking.

Access: Of the 43 parcels proposed for exchange, 23 parcels totaling 2,300 acres have some means of access. Those 23 parcels are UN1-4, 7, 12, 14, 17, 18, 21, 24-27, 37, 38, 42, 61-64, 68, and 71. The accessibility of 18 of these parcels is due to their proximity adjoining National Forests, which does not necessarily infer vehicular access. Four parcels are accessible by public road. One parcel (UN71) has access from the adjoining Blue Mountain Forest Wayside, which is state-owned land.

Visual Resources

All potential disposal parcels in the Grande Ronde Basin are within the Visual Resource Management Class III designation (see glossary for information specific to VRM management classes).

Soils

To date, soils information specific to the potential disposal parcels in the Grande Ronde Basin has not been compiled.

Prime/Unique Farmlands: None of the potential disposal parcels in the Grande Ronde Basin meet soil requirements for prime or unique farmland.

Cultural and Paleontological Resources

Cultural Resources

Very few of the selected BLM parcels in the upper reaches of the Grande Ronde have been intensively surveyed for the land exchange. The Stockhoff Basalt Quarry site (an important prehistoric lithic resource locale) is adjacent to an 80-acre parcel of BLM land. An early wagon route and monument is located on one parcel overlooking the Grande Ronde River, near (but not on) the primary route of the Oregon Trail. The historic property requires further documentation prior to evaluating significance. No Oregon Trail properties are known to be located on lands proposed for exchange.

Traditional Use: Historic records and other sources identify fishing locations on most major tributaries of the upper Grande Ronde. Five isolated BLM parcels (320 acres total) include or are adjacent to fishery streams of the upper Grande Ronde River such as Dark Canyon Creek and Sheep Creek. No site-specific root gathering fields, fishing stations, or traditional cultural properties have been identified to date on the lands proposed for exchange.

Paleontological Resources

BLM-managed parcels proposed for exchange in the Grande Ronde Basin are not known to contain, nor are they likely to contain, occurrences of vertebrate fossils.

Timber Resources

All of the approximate 2,260 acres of forestlands considered for disposal in the Grande Ronde Basin to date are commercial forestlands. Forest stands range in size from 5 to 235 acres, with the average stand being 69 acres (Appendix A, Table A-5). At least one partial cut entry has been made on 26 parcels (totaling almost 2,000 acres) within the past 45 years. Timber cruises on these forested stands have not been completed at this time, but will be complete and available prior to making decisions on their exchange.

Livestock Grazing

The BLM has grazing leases issued for 254 AUMs on 32 of the potential disposal parcels (see Table 4-1 for list of parcels). All parcels are relatively small, and most are grazed for only a short time each year. Several parcels are adjacent to National Forest lands, and some allotments have been incorporated into National Forest grazing allotments. Other allotment areas are surrounded by private land and receive only Custodial management.

Description of Powder River Basin

Introduction

The Powder River Basin encompasses approximately 4.1 million acres. The Powder River Basin extends from the crest of the Blue Mountains in the west, eastward to the Snake River, and from the Burnt River Mountains in the south, northward to the watershed divide with the Grande Ronde Basin. It incorporates nearly all of Baker County, southern portions of Union and Wallowa counties, and northern portions of Malheur County. For the purpose of this analysis, a very small portion at the north edge of the Malheur Basin (the portion within the Baker Resource Area) has been included with the Powder Basin discussion.

This basin is within the Blue Mountain physiographic province, which is described at the beginning of Chapter 3 (Figure 1-3)

Approximately half of the basin is public lands managed by the Forest Service and BLM, with National Forest comprising most of the Federal portion (Figure 3-8). The other half is largely in private ownership, which includes some major holdings of forestland and agricultural and rangeland. Less than one percent is administered by Oregon state agencies.

Geology/Soils/Water/Air

The basin is formed from the slopes of several rugged mountain ranges, the Blue Mountains to the west, the Wallowa Mountains to the northeast, the Burnt River Mountains in the south, and the Snake River Breaks on the east. The Baker, North Powder, Eagle, and Pine Valleys provide most of the level terrain for agriculture. Numerous other long, narrowly constricted valleys occurring along the major streams between mountainous terrain. The Burnt River Mountains have a large deposit of limestone exposed along Interstate Highway 84 south of Durkee.

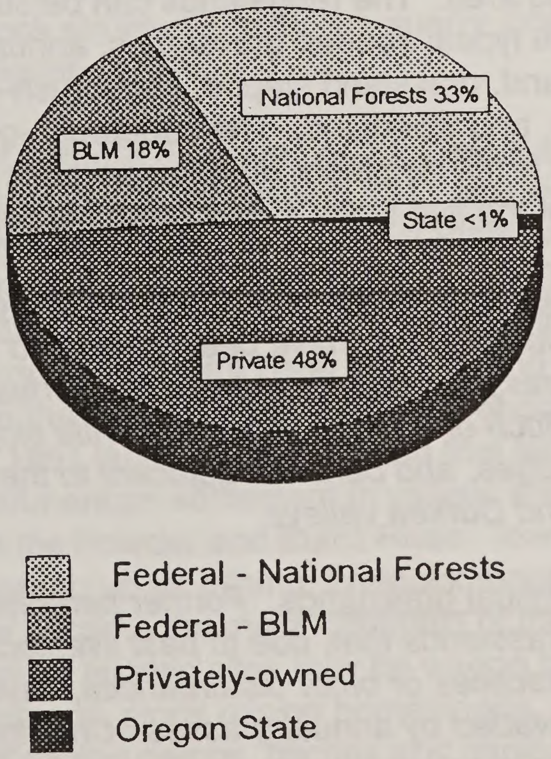
Topography of the Powder River Basin is similar to the Grande Ronde, with the shared features of the Blue and Wallowa Mountains and their foothills. However, the river valleys of the Powder Basin are generally narrower and smaller overall.

The mainstem Powder River is formed by the merging or its two upper tributaries, McCully Fork and Cracker Creek, which join at the town of Sumpter. From here, the river extends 144 miles from the Blue Mountains to its confluence with the Snake River near Richland Oregon, 296 miles upstream from the confluence of the Snake and Columbia Rivers. Another major stream, the Burnt River, is formed by the merging of several tributaries in Unity Valley. From here, the river flows approximately 80 miles to its confluence with the Snake River near Huntington, 328 miles upstream from the Snake-Columbia confluence. Other major water systems in the basin include Anthony, Wolf, Eagle, and Pine Creeks.

Temperatures and precipitation vary with elevation. Average growing season is shorter than in the Grande Ronde Valley, and summers are generally hotter and drier than in the Grande Ronde Basin.

Soils and geology in the Powder Basin are similar to those in the Grande Ronde. Soils on warm, dry, gently sloping to very steep hills formed in colluvium derived from basalt. These soils are shallow to moderately deep, well drained, very

Figure 3-8. Land Ownership in Powder/Malheur River Basin.



stony clay loam to loam texture, and display a moderate-to-high hazard from water erosion. There are also soils formed in colluvium and residuum derived from granitic rocks on moist, gently sloping to very steep hills and mountains. These soils are shallow to deep, are well drained, have texture range from very stony loam to loam, and display a moderate-to-very high hazard from water erosion.

Vegetation

Forestlands

The BLM manages about 17,000 acres of forested lands in the Powder River Basin. This acreage accounts for less than 3 percent of the total forest ownership in this basin. These forest sites are typical of Blue Mountain mixed conifer stands and similar to those in the Umatilla and Grande Ronde basins. Ponderosa pine predominates on south slopes, and Douglas-fir/grand fir associations are found on cooler north slopes and narrow canyon bottoms.

Large Tree Component: Of the 17,000 acres of forestlands managed by BLM in the Powder River Basin, approximately 6,440 acres contain large trees at varying stocking levels.

Rangelands

Rangelands are the dominant vegetation type in the Powder Basin, occupying nearly 60 percent of the land area. The rangelands can be subdivided into five types: seeded grasslands, annual grassland, grassland steppe, sagebrush-grassland steppe, and woodland. The sagebrush-grassland steppe is the dominant rangeland type in this basin. Each of the five types is described below:

- Seeded grasslands*: Degraded rangelands or old fields that have been seeded to non-native grass species, usually crested wheatgrass. Much of this is located on gentle slopes, ridges, and benches adjacent to the Keating and Durkee valleys.*

- Annual grasslands*: Former perennial grasslands that, due to past livestock grazing practices or other disturbances, have been invaded by annual grasses. Cheatgrass is the most common annual grass.*

- Grassland steppe*: Dominated by Idaho fescue with lesser amounts of bluebunch wheatgrass and a shrub component that includes chokecherry, hawthorn, snowberry, serviceberry, elderberry, and mock orange in randomly distributed patches on steep north-slope sites. South slopes are dominated by bluebunch wheatgrass with minor amounts of Idaho fescue and a variable bitterbrush component.*

- Sagebrush-grass steppe*: Dominated by bluebunch wheatgrass on ridgetops, hilltops, and south facing slopes, and Idaho fescue on the north facing slopes. Varying amounts of Wyoming big sagebrush and basin big sagebrush occur depending on landscape position, soils, and parent material. Mountain big sagebrush is generally found above 4,000 feet in elevation on many rangelands sites.*

- Woodland type*: Mixture of juniper, sage, grass, and other shrubs, especially bitterbrush. This type is often a transition zone between the grasslands or sagebrush-grass and the forestlands.*

Riparian/Wetland Areas

Numerous small streams and springs are scattered throughout the basin, with associated riparian zones.

Wildlife and Fisheries

Wildlife Habitat

Wildlife habitats within the Powder Basin are rangeland (including woodland) and coniferous forest. Refer to Appendix B (Table B-1) for a composite list of wildlife species typically associated with these habitat types in the NOALE area.

Rangeland/Woodland Habitat

The sagebrush-grassland habitat is not considered sensitive or endangered, but its vastness and associated fauna richness make it an important landscape component. This type, along with the woodland type, provides niches for over 140 vertebrate wildlife species. These species include more than 40 mammals, 80 birds, and 20 amphibian/reptiles.

Forest Habitat

Forestlands provide habitat for Rocky Mountain elk and mule deer. Especially important are low elevation forests that provide winter thermal cover. Other mammal species found in this habitat are fringed myotis, Hoary bat, long-eared myotis, snowshoe hare, white-tailed deer, red squirrel, pocket gopher, black bear, and mountain lion. Forestlands are also important for primary cavity excavators and secondary cavity nesters.

Riparian/Wetland Habitat

Mammal species using riparian/wetland habitats in the Powder Basin include: vagrant shrew, water shrew, silver haired bat, red-backed mouse, mountain vole, long-tailed vole, porcupine, golden-mantled ground squirrel, raccoon, long-tailed weasel, mink, river otter, beaver, muskrat, mule deer, and Rocky Mountain elk.

Amphibian/reptiles found are: Pacific tree frog, tiger salamander, long-toed salamander, western toad, and wandering garter snake.

Some avian species, especially neotropical migrants, that are closely associated with riparian types are western king-bird, yellow-breasted chat, MacGillivray's warbler, song sparrow, marsh wren, killdeer, and mourning dove.

The bald eagle, Lewis' woodpecker, and bats such as the long-eared and long-legged myotis are species of concern occasionally found in and around forested riparian areas and along some of the larger river systems.

Old-Growth Habitat

Habitat and associated species are similar to that found in the Grande Ronde Basin.

Special Status Wildlife Species

Refer to Appendix B (Table B-3) for a list of special status species that may by found in the four basins addressed in the NOALE.

Fisheries

A variety of trout species (Rainbow, bull, and brook) are in the Powder River portion of basin, and rainbow trout is in the Burnt River portion. Construction of the Hells Canyon Dam on the Snake River in the 1970s ended passage of anadromous species into these rivers.

Special Status Fish Species

The trout populations in this basin may include redband trout, which is listed as a Sensitive Species by the State of Oregon, the U.S. Forest Service, and the BLM. Some electrophetic work has been conducted to identify streams that show red band characteristics. However, in this EIS, the redband trout and rainbow trout are discussed collectively.

Cultural and Paleontological Resources

Cultural Resources

The culture history of the Powder and Burnt River geographic area is broadly similar to that of the Grande Ronde Basin. Ethnographic and historic records show that the area was utilized by the Umatilla, Cayuse, Walla Walla, Nez Perce and Paiute tribes. Pine Valley, Eagle Creek, and the Powder River were areas for camas gathering, hunting and fishing; one or more Paiute bands are known to have gathered and hunted the Burnt River area throughout its reach. Although there is abundant archaeological evidence for task sites in the Blue Mountains (such as plant gathering areas), there are few recorded historic references for traditional subsistence locations. Characteristic sites for the geographic area are lithic scatters with features, rock structures, rock art, quarry locations, trails, and spiritual sites.

Wilson Price Hunt's Astorian party traveled up the Powder River and Burnt River in 1811 and were followed by other explorers and fur traders who worked the Blue Mountain region in the 1820s and 1830s. During the 1840s to 1860s, emigrants passed through the Burnt River Canyon and Baker Valley over the Oregon Trail. Discovery of gold near Auburn in 1861 launched a gold rush that led to rapid EuroAmerican settlement in valleys and foothills of the Powder and Burnt River. Towns and hamlets sprang up as mining, livestock ranching, and timber became the main industries of the basin. Typical historic sites may be wagon trails, emigrant camps, stock raising homesteads, gold mines and mining camps, ditches and mining landscapes.

Paleontological Resources

Vertebrate and invertebrate faunal and botanical fossil localities of possible scientific importance are found in the Powder River basin, particularly in the upper Burnt River drainage, middle Powder River, and Snake River breaks areas. Common fossils such as marine invertebrates and fossilized wood or tempsyka (fern) are usually not considered scientifically important and will not be further discussed.

As in the other basins, the geological formations in the Powder Basin preserve a rich record of mammalian faunas representing middle and late Cenozoic time. Formations range in age from the Pleistocene back about 15 million years to the middle Miocene. That interval witnessed major landscape and climatic changes, and a continuously changing suite of vertebrate faunas. Mammalian fauna represented in the fossil record includes Miocene horses, rhinos, peccaries, camels, beavers, and highly diverse rodents and other small mammals. Although there is a wide array of localities providing vertebrate associations, they are mostly geographically scattered, which hinders stratigraphic establishment of their occurrence.

Some areas within the basin have unnamed, Miocene and younger age, basin-fill deposits consisting of a great variety of volcanic rocks complexly interlayered with tuffaceous sedimentary rocks. The tuffaceous sedimentary rocks consist primarily of lake deposits and some stream deposits and are known to contain mammalian fossils at some locations. Basin-fill deposits are found in the Unity, Burnt River, Durkee, Morman, Dixie Creek, Huntington, Dooley Mountain, Baker Valley, Keating, Virtue Flat and Richland basins. In addition, numerous small and scattered sedimentary, “high bar” deposits of Tertiary age are located along the breaks of the Snake River.

Fossil localities in the Unity, Durkee, and Keating valley areas are unnamed and remain poorly understood. Further work is needed to provide better documentation of the vertebrate fauna, and to continue to work out stratigraphic sequences for correlation with other fossil localities.

Socioeconomics

Lands within the larger valleys have been largely converted to agriculture and urban uses. Beyond those centers of population, the landscape is mainly rural pastureland, rangeland, and forest. Because of the shorter growing season in the Powder Basin, agricultural use here is more focused on livestock and forage production than in the Grande Ronde Basin.

Economically important land use activities include livestock production, farming, timber production, and recreation and tourism. Historically mining provided a much greater contribution to the local economy than at present.

Private Lands Considered for Acquisition in Powder River Basin

Some lands are expected to be acquired in the Powder Basin during future transactions of NOALE, but specific lands have not been identified, to date. The BLM has, however, identified five acquisition areas of interest (Appendix A, Table A-2):

- The breaks on the west side of the Snake River
- Lookout Mountain
- Pedro Mountain/Morman Basin
- Dooley Mountain/Ebell Creek Divide/Burnt River Canyon
- Along the Powder River below Thief Valley Reservoir

In addition, the BLM would consider acquisition of other lands in the Powder Basin that have certain resource values and meet the criteria listed in Chapter 1.

Following are descriptions of certain resources on private lands within the Powder River Basin that may be acquired, with special attention to the five acquisition areas of interest. Since specific lands have not been identified to date, the descriptions are general.

Resources on Potential Acquisition Lands in Powder River Basin

Vegetation

Forestlands

Forested areas on the five acquisition areas of interest are typical of Blue Mountain forests. Acquisition criteria emphasizes forestlands and riparian habitats over rangelands.

Large Tree Component: This information cannot be determined until specific parcels have been proposed for acquisition.

Rangelands

Rangelands within the acquisition areas of interest are mostly sagebrush-grassland steppe. There are also sizable areas of perennial grassland and woodland. The acquisition area of interest that is below Thief Valley Reservoir is largely sagebrush-cheatgrass.

It is unlikely that BLM would acquire large areas of non-native grass seedings or annual grasslands. Some of these types, however, may be acquired as areas within other range types.

Riparian/Wetland Areas

Reference discussion about riparian/wetland areas in the John Day Basin section.

Some important streams in the five acquisition areas of interest include:

- Daly, Connor, and Sisley Creeks (Lookout Mountain).
- North and South Dixie Creeks (Pedro Mountain).
- Ebell and Deer Creeks (Dooley Mountain).
- Powder River tributaries and the Powder River below Thief Valley.
- Pine Creek (Snake River).

Special Status Plant Species

The Powder Basin has known habitat for two special status plant species: Snake River goldenweed (*Haplopappus radiatus*) and Oregon semaphore grass (*Pleuropogon oreganus*). The *Haplopappus radiatus*, a state-listed endangered species and BLM Sensitive Species, is within the Lookout Mountain zone for potential acquisition of private land.

The *Pleuropogon oreganus*, a state-listed threatened species and BLM Sensitive Species, is within specific tracts of private land identified for potential acquisition within the Union County portion of the Powder River Basin. These tracts are outside of the large identified acquisition areas of interest.

Private lands within the acquisition zones have habitat for some special status plant species, primarily onions (*Allium* sp.) and milkvetch (*Astragalus* sp.), for which BLM is cooperating with the Oregon Natural Heritage Program in collecting data specific to their distribution and population to assess their status.

Wildlife and Fisheries

Wildlife Habitat

The acquisition areas of interest in the Powder River Basin provide habitat for a variety of wildlife species (see Appendix B, Table B-1). Rocky Mountain elk and mule deer are found in the Lookout, Dooley, and Pedro Mountain areas. Black bear and cougar could also be expected in these areas. Antelope use the Thief Valley area. In addition, antelope and sage grouse are present in the sagebrush-steppe habitat, and bighorn sheep occupy habitat along the Snake River breaks and Burnt River Canyon.

Bighorn sheep have recently been released in the Burnt River Canyon area and will probably drift up side drainages toward the Dooley Mountain/Ebell Creek Divide area.

Upland game birds present include blue and ruffed grouse in the three mountain areas, and chukars below Thief Valley and on the Snake River breaks. Sage grouse might be found in some of the lower areas below Lookout and Pedro Mountains.

The forested areas are home to several species of cavity nesters. Pileated woodpeckers are known to occur on Lookout Mountain and Pedro Mountain.

Old-Growth Habitat

This information cannot be determined until lands for acquisition are specifically identified.

Special Status Wildlife Species

Reference Appendix B, Table B-3 for a list of special status wildlife species known or thought to occur in the NOALE area.

Fisheries

Several small streams within acquisition areas of interest may currently provide habitat for one or more of the species inhabiting this basin. Other streams may have historically had fish, but presently do not due to their poor condition.

Recreation

Recreational Values and Opportunities: The acquisition areas of interest have opportunities for a variety of recreational opportunities, including such activities as hunting, fishing, hiking, horseback riding, off- highway vehicle use, camping, and picnicking. Lands along the Snake River reservoirs offer opportunities for boating and other water sports.

Access: Since access is an important criteria for lands acceptable to the BLM, it is anticipated that any properties to be acquired will have public access. In most cases, public roads provide access. Some properties may be adjacent to National Forest land, which provide access. In some cases, acquired land may provide access to public land already in BLM management that does not now have access.

Visual Resources

The Snake River Breaks/Lookout Mountain area and Powder River below Thief Valley Reservoir are rated Visual Resource Management Class II, which indicates high quality scenery that would attract sightseeing interest (see glossary for information on VRM management classes).

Wild and Scenic Rivers

A 1.5 mile segment of the Powder River below Thief Valley Reservoir, which is one of the acquisition areas of interest, is designated a Scenic River under the Wild and Scenic Rivers Act.

Wilderness Areas

The potential acquisition lands in the Powder Basin are not within or adjacent to designated Wilderness Areas. However, private lands in the northern portion of the Snake River Breaks area that may potentially be acquired are within or adjacent to the Homestead and Sheep Mountain Wilderness Study Areas.

Areas of Critical Environmental Concern

Some private lands of acquisition interest in the northern portion of the Snake River Breaks area may be within or adjacent to the Sheep Mountain and Homestead Areas of Critical Environmental Concern (ACECs). Also, some private land below Thief Valley Reservoir is adjacent to the Powder River Canyon ACEC.

Soils

Soil map units, types, and characteristics cannot be determined until specific acquisition lands are identified.

The variety of topography and elevation within the acquisition areas of interest could translate to numerous soil map units, which may have a variety of soils, erosion hazards, and other characteristics. Much of the potential acquisition area consists of steep, rugged topography and has soils that could be erosive, depending on slope, parent material, and vegetation cover. Many soil units would have a high content of rock fragments in the profile, and rock outcrop may be an important component of several units.

Prime/Unique Farmlands: Prime or unique farmland occurs within the Powder Basin. However, until specific lands for acquisition are identified, the presence of prime or unique farmland cannot be determined. Given the locations of the acquisition areas of interest and other lands of likely interest, there is little likelihood that BLM would acquire any of this resource.

Cultural and Paleontological Resources

Cultural Resources

The acquisition areas of interest were used by the Nez Perce, Umatilla, Cayuse, and Paiute tribes for hunting, fishing, gathering, and travel. In particular, Dooley Mountain was a source for an obsidian-like vitrophyre used throughout the region. Typically, sites expected on land to be acquired would be small lithic scatters representing seasonal use and dating anywhere from 6000 B.C. to 1800 A.D.

Historic sites most likely to be found in the mountains would include the remains of mining towns, gold camps, homesteads, ditches, and wagon roads dating from 1860 to 1930. Several early mining districts were located in the Pedro Mountain and Snake River Breaks vicinity of the Blue Mountain gold belt. Although regionally significant historic properties have been identified for potential acquisition, these are outside of the large identified acquisition areas of interest.

Traditional Use: There are no known religious sites, traditional cultural properties, or specific traditional use locations for the acquisition areas of interest.

Paleontological Resources

Since specific lands for acquisition have yet to be identified, the presence of paleontological resources at this time is speculative.

No scientifically important paleontological localities or formations are known to be located on acquisition areas of interest. The Snake River breaks area includes ancient marine formations with an abundance of common invertebrate fossils, such as marine ammonites and mollusks. Studies of these formations and fossils aid in the general understanding of geologic events for the canyon area, but the localities are not ordinarily considered significant.

Timber Resources

No information is currently available on timber volumes and other timber resource values.

Livestock Grazing

All privately owned land in this basin, including the acquisition areas of interest, is presumed to be grazed by livestock. However, information on the intensity or duration of such use and its type of management system is not known.

Some private land within the Lookout Mountain/ Snake River Breaks area and the area of acquisition interest that is below Thief Valley Reservoir is within BLM Custodial allotments (see glossary). Other private lands, yet to be identified, may be located within allotments where BLM does exercise control, and be used under Exchange-of-Use Agreements with BLM. Until specific lands for acquisition are identified, no further information on these lands can be determined.

Much of the private land on Pedro Mountain is intermingled with BLM-administered land and is within grazing allotments. These lands are subject to a deferred rotation system in conjunction with other private lands and BLM allotments.

A large portion of the Ebell Creek Divide acquisition area of interest is within the North Bridgeport Allotment, which is used under an Exchange-of-Use Agreement authorizing 680 AUMs. A deferred rotation system has been implemented here also.

Public Lands Considered for Disposal in Powder Basin

Approximately 27,217 acres of public land managed by the BLM in the Powder Basin are proposed for disposal (Appendix A, Tables A-1a and A-1b) . This land is in Baker and Union counties and is scattered in 246 parcels, ranging in size from 2 to 2,534 acres.

Resources on Potential Disposal Lands in Powder Basin

Vegetation

Forestlands

Approximately 1,970 acres of the 17,000 acres of forested lands managed by BLM in the Powder Basin (approx. 11.5%) are being considered for possible exchange. These forestlands are scattered on 66 parcels, ranging in size from 2 to 118 acres in size, with an average stand size of 30 acres.

Eight forest types are represented on the forestlands proposed for disposal. Ponderosa pine is the dominant species in four of the types. Acreages are approximate.

• Ponderosa pine (south aspects; low elevation):	1,025 acres
• Ponderosa pine/Douglas-fir:	201 acres
• Douglas-fir:	100 acres
• Douglas-fir/white fir:	41 acres
• Ponderosa pine/larch:	86 acres
• Ponderosa pine/lodgepole pine:	60 acres
• White fir/larch:	31 acres
• Mixed conifer:	426 acres

The mixed conifer consists of white fir, Douglas-fir, larch, lodgepole pine, ponderosa pine, and Englemann spruce.

Large Tree Component: Of the approximate 1,970 acres of forested land being considered for exchange, approximately 471 acres contain a large tree component. These large trees are on 23 parcels (Appendix A, Table A-3). Species composition of the large trees, by acres, is listed below:

• Ponderosa pine	224 acres
• Ponderosa pine/Douglas-fir	45 acres
• Douglas-fir	12 acres
• Ponderosa pine/lodgepole pine	17 acres
• White fir/larch	31 acres
• Mixed conifer	142 acres

Rangelands

In general, rangeland vegetation on the potential disposal parcels is similar to that of the Powder River Basin as a whole. Most of the parcels are in the sagebrush-grass steppe, and numerous parcels are also in the grassland steppe.

Riparian/Wetland/Stream Areas

Relatively few of the parcels considered for disposal have streams crossing them. Because most of the parcels are small, the stream segments crossing them are short, and the total riparian acreage is small.

Many of the riparian areas are in poor condition, often having few riparian species present. The poor condition of streams is presumed to be a result of past livestock practices and the tendency for livestock to prefer grazing along streams rather than elsewhere. Other activities, such as mining, may also have impacted some parcels.

Special Status Plant Species

Three special status plant species are known to occur, or have potential to occur, on BLM-administered public lands considered for disposal in the Powder Basins: Snake River goldenweed (*Haplopappus radiatus)*, Oregon semaphore grass(*Pleuropogon oreganus*), and Grape fern (*Botrychium crenulatum*).

Haplopappus radiatus, a state-listed endangered species and BLM Sensitive species, has potential to occur on several of the BLM-administered tracts (approximately 2,500 acres total).

Pleuropogon oreganus, a state-listed threatened and BLM Sensitive species, occurs within the Jimmy Creek watershed, which encompasses three potential disposal parcels (UN31-33). This species is not known to occur on those BLM-administered tracts, but the tracts contribute drainage to the plant's habitat.

Botrychium crenulatum, a candidate for state listing and also a BLM Sensitive Species, was reported to occur on one BLM-administered tract on Pine Creek in Baker County.

There may be occurrences of several other plant species for which BLM is currently cooperating with the Oregon Natural Heritage Program to collect distribution and population data to assess their status.

Wildlife and Fisheries Resources

Wildlife Habitat

The BLM-managed lands considered for disposal in the Powder Basin consist of a mixture of the major vegetative types and associated wildlife species described in the general description of this basin. See Appendix B, Table B-1.

Old-Growth Habitat

Of the 470 acres of disposal forestlands with a large tree component, 147 acres have the potential to be considered old growth forest habitat. (See description of old-growth forest habitat in the John Day Basin section under *Wildlife Habitat).*

Special Status Wildlife Species

The parcels in this basin have not yet been specifically assessed for Special Status wildlife species. Refer to Table B-3 for a list of special status species that may be found.

Fisheries Resources (Including Special Status Species*)*

A total of 33 fish species are known to occur in the Powder Basin, some within the potential disposal parcels (Appendix B, Table B-2). Two of these species are Bureau Sensitive: redband trout (resident) and Pacific lamprey.

Recreational Resources

Recreational Values and Opportunities: Dispersed recreation (including hunting, fishing, sightseeing, off-highway vehicle use, horseback riding, and hiking) occurs on the public lands proposed for disposal, primarily those that have public access. On the disposal lands that have limited access as described below, these recreational opportunities are constrained.

Access: Most disposal parcels in the Powder Basin are small and isolated, intermingled with privately owned land. Approximately 60 parcels of the 246 proposed for disposal have legal access. Several potential disposal parcels adjoin National Forest land and therefore have legal access, but not necessarily vehicular access. A number of other potential disposal parcels are accessible by county roads or state highway.

Visual Resources

The proposed disposal lands are within Visual Resource Management Class III designation (see glossary for information on VRM management classes).

Soils

Soils information by specific parcel has not yet been gathered. Disposal parcels could be expected to have typical forest or rangeland soils found in the basin.

Prime or Unique Farmland: Portions of 10 proposed disposal parcels meet soil requirements for prime farmland when irrigated: (B5, 29, 45-47, 87, 202, 203, 206, and 218). There are no parcels with unique farmland soils.

Cultural and Paleontological Resources

Cultural Resources

Pine Valley, Eagle Valley and certain tributaries of the Powder River were important traditional use areas. Although seven BLM parcels are located within 5-10 miles of recorded traditional use stations, no specific root gathering fields, fishing stations, or traditional cultural properties have been identified to date on the lands proposed for disposal.

Paleontological Resources

Seven recorded paleontological vertebrate/botanical localities are located on BLM-administered parcels proposed for disposal in the Powder Basin.

Approximately 70 parcels have been mapped as geologically and paleontologically interesting, and worthy of further study. These parcels exist in clusters near Unity, Hereford, Baker City, Medical Springs, Pleasant Valley, and Durkee. The rocks in these parcels are volcaniclastic, either primary ash deposits or lacustrine sediments, and Eocene-Oligocene-Miocene in age. Fields checks are needed for mapping accuracy and actual incidence and inventory of fossil resources.

Timber Resources

Approximately 1,970 acres of commercial forestlands are among those BLM-administered public lands identified for possible disposal. About 820 acres have had at least one partial cut entry within the past 45 years, and most of these stands are now in an early-to-mid seral stage of development.

Timber cruises on these forested stands have not been completed at this time, but will be complete and available prior to making decisions on their exchange.

Livestock Grazing

Nearly all of the parcels proposed for disposal are permitted for grazing. Most of the allotments are on small isolated parcels that are fenced with a relatively large amount of private land. Most of these parcels are under “Custodial” management, meaning that BLM does not specify actual use of the parcel. A few parcels may be within “Improve” and “Maintain” allotments on which BLM specifies use and management (see glossary for information on types of allotments).

Chapter 4 - Environmental Consequences

Introduction

This chapter presents discussions in similar order as Chapter 3, with explanations of terms and impact assessment (management efficiencies, interest or user group satisfaction, and plan maintenance), followed by descriptions of common impacts to resources across the EIS area, then socioeconomics impacts, and lastly impacts specific to the four basins: John Day, Umatilla, Grande Ronde, and Powder River.

Table 4-1 summarizes environmental consequences by basin for the two exchange proposals (Alternatives 1 and 3), with focus on the Phase 1 exchanges. Table S-3 in the executive summary identifies cumulative impacts for the exchange proposal, including Phase 1 and future exchanges identified to date. Any environmental assessments tiered to this EIS will include a section on cumulative impacts, as the exchange progresses.

Terms Used in Discussion of Impacts

Large Trees: In the consequences section, as in the Affected Environment chapter, large trees are trees that have a diameter at breast height of 21 inches or greater.

Riparian/Wetlands: The impacts discussed for each alternative use a range of 4 to 7 acres per perennial stream mile for describing the amount of associated riparian areas.

Management Efficiencies

Land tenure adjustments involving disposal of small and/or isolated parcels of land and acquisition of larger or contiguous blocks of land have several management efficiency benefits:

- Reduced administrative cost from not having to travel to and manage small distant parcels.

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	**Disposal Lands**	**Comments**
John Day Basin **- Alternative 1 (Preferred Alternative)**			
Exchange	Phase 1: 47,400 acres Future: 21,300 acres Total: 68,700 acres	Phase 1: 46,000 acres Future: 8,400 acres Total: 54,400 acres (419 parcels)	Acquiring JV & Pioneer Resource lands in Phase 1 would block 56,900 acres of Federal and state public lands bordering Umatilla National Forest for over 20 miles.
Forestlands	Phase 1: 10,634 acres Future: 8,740 acres	Phase 1: 7,230 acres Future: 3,941 acres	Net gain: 3,404 acres in Phase 1.
Large Tree Component	Phase 1: 4,810 acres Future: 2,390 acres	Phase 1: 4,111 acres Future: 2,315 acres	Net gain: 699 acres in Phase 1.
Riparian/Wetland Areas	Phase 1: 71.5 miles of perennial streams, 286-500 acres of riparian habitat. Would include: 13.3 miles in Wall Creek drainage. 12 miles on the N. Fork John Day River. 28 miles of other tributaries to the N. Fork John Day River. 6.5 miles on S. Fork John Day and Indian Creek. 3.5 miles river frontage on the S. Fork John Day Wild and Scenic River. Future: 7.6 miles and 30-53 acres of riparian habitat	Phase 1: 12.5 miles of perennial streams on 33 parcels, 50-87 acres of riparian habitat. Future: 2.2 miles, 9-15 acres of riparian habitat.	Net gain: 59 miles of perennial streams and 236-413 acres of riparian habitat in Phase 1.
Special Status Plant Species	Potential for 5 species	1 Bureau Sensitive species (arrowleaf thelypody)	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Wildlife Habitat Old-Growth	*Phase 1:* Approximately 600 acres *Future:* Approximately 270 acres	*Phase 1:* 939 acres (31 parcels) Size range: 6-100 acres *Future:* 1,334 acres (11 parcels) Size range: 18-243 acres	*Net loss:* About 339 acres in Phase 1.
Fisheries	*Phase 1:* 53.9 miles of anadromous salmonid habitat in the N. Fork John Day Subbasin, 1 mile in the S. Fork John Day River below Izee Falls. 5.5 miles of resident salmonid habitat in the S. Fork John above Izee Falls. (59.4 total miles of fish habitat) *Future:* 4.8 miles of anadromous salmonid habitat in Rudio and Holmes Creeks.	*Phase 1:* 5.15 miles of anadromous salmonid habitat and 3.1 miles of resident salmonid habitat within 26 parcels (8.25 total miles) *Future:* 1.7 miles of anadromous salmonid habitat within 4 parcels.	*Net Gain:* 51.15 miles of fish habitat in Phase 1.
Recreation	13 dispersed recreation river sites between Camas Creek and Monument. Oregon State Scenic Waterway between RM 20.2 and RM 76 on North Fork John Day River. 54 dispersed campsites on South Fork John Day River.	Limited dispersed recreation opportunities. No developed sites.	
Access	17 miles along North Fork Camas Creek to Potamas Creek. Road access up Jericho, Stony, Hunter, Potamus, Mallory, Graves, Cabin, and Little Wall creeks. JV Ranch (19,000 acres) accessible. 4 miles of river access on South Fork John Day River with 3.5 miles of public road access.	No access to 17 of 26 parcels in Umatilla and Morrow counties; no access to 317 of 386 parcels in Wheeler and Grant counties.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	**Disposal Lands**	**Comments**
Wild & Scenic River	1,270 acres within corridor of John Day Wild & Scenic River Includes 4.0 miles of river frontage.	G429, 430, and 433 (130 acres) within proposed Wild & Scenic boundary of South Fork John Day river. G430 has 0.2 miles of river frontage.	*Net Gain:* 3.8 miles of Wild and Scenic River, 1,140 acres in Wild and Scenic River corridor.
Floodplains	70 acres of FEMA-designated floodplain on South Fork John Day River. Another 218 acres of floodplains (not FEMA-designated).	10 acres of FEMA-designated floodplains on South Fork John Day River near River Mile 37.	
Soils	Known information, to date, indicates no prime/unique farmlands.	Portion of Parcel M30 is prime farmland, if irrigated. No unique farmland soils.	
Cultural Resources	None known.	None known.	
Traditional Use Areas	3 tributaries of North Fork John Day.	*Phase 1*:13 parcels totaling 780 acres within 5 miles of traditional use areas in Owens, Snipe and Cable Creeks and in Camas Prairie. *Future*: Unknown until surveys are completed.	
Paleontological Resources	None known.	John Day Formation localities of national & international significance, including possibly significant botanical fossils.	
Timber Resources	*Phase 1:* 44.8 MMBF of commercial timber on 10,634 acres. Stand size ranges: 10-900 acres. *Future:* Approximately 43.2 MMBF of commercial timber on 8,740 acres.	*Phase 1:* 59.7 MMBF of commercial timber on 7,230 acres. Stand size ranges: 1-300 acres. *Future:* Approximately 23.3 MMBF of commercial timber on 3,941 acres.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Livestock Grazing	_Phase 1:_ 8-15 AUMS/acre estimated on 47,400 acres for total of 3,160 to 5,925 AUMs.	_Phase 1:_ 108 Allotments with 6,139 AUMs would be transferred to private sector.	
	Future: 8-15 AUMS/acre estimated on 21,300 acres for total of 1,420-2,662 AUMs.	_Future:_ 8 Allotments with 180 AUM's would be transferred to private ownership.	
Visual Resources	To be determined.	130 acres with proposed Wild and Scenic River boundary of South Fork John Day River. One parcel (G430) has 0.2 miles of river frontage.	
Umatilla Basin - Alternative 1			
Exchange	840 acres identified to date	7,157 acres (69 parcels)	
Forestland	_Phase 1_: 0 _Future_: Potential to acquire 450 acres of forestland along North Fork Walla Walla River.	_Phase 1_: 416 acres of forestland in 13 parcels (M8-13,15; UM9-11,13,48, and 62). _Future_: 291 acres of forestland in 8 parcels (UM12, UM40-46)	Retained areas include S.Fork Walla Walla River and vicinity of Umatilla Indian Reservation. _Future_: Reduction of 257 acres of forestland.
Large Tree Component	_Phase 1_: 0 _Future_: Data contingent on identification of lands to be acquired.	_Phase 1_: 188 acres with large trees in 7 parcels (M8,9,11-13, 15, &62). _Future_: 236 acres with large trees in 7 parcels (UM40-46).	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Rangelands	*Phase 1*: 0 *Future*: Potential to acquire 390 acres along North Fork Walla Walla River.	*Phase 1*: Total of approx. 3,000 acres transferred to private ownership. Approx. 759 acres in 14 parcels would remain in, or be converted, to agriculture use: M26,28; UM18, 20-23,29,30,32,36-38,& 64. Approx. 165 acres in 5 parcels (UM24-28) would be converted to housing/industrial use. *Future*: Approx. 197 acres 3 parcels (M27, UM68, and 75) would be converted to agriculture use. Approx. 21 acres 2 parcels (UM63 and 67) would be converted to housing/industrial use.	
Riparian/Wetland Areas	*Phase 1*: 0 *Future*: 3 miles (including 0.5 frontage) on the N. Fork Walla Walla River; 3.8 miles of non-perennial streams; and 12-21 acres of riparian area.	*Phase 1*: 1.14 miles of perennial streams on 3 parcels (M8 and M12 and UM10) and 2.81 miles of non-perennial streams on 11 parcels (UM11, 14, 19, 20, 39, 62, 74, 78, and 79; M12 and M13). 4-8 acres of riparian area. Intermittent pond on UM26. *Future*: Approx. 8 miles perennial stream on 8 parcels (UM35,40, 43-46, 69, and 75) and 3.16 miles of intermittent streams on 5 parcels (UM12, 40, 43, 44, and 75). 32-56 acres of riparian areas. UM35 (15-acre wetland created by beavers, equates to 40 acres of riparian vegetation.)	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Columbia Basin Shrub-steppe	*Phase 1*: 0 *Future*: n/a	5,200 acres in 33 parcels. *Phase 1*: 2,089 acres of Columbia Basin shrub steppe on 25 parcels: M24, 28; UM17-34, 36-38, 64,& 76. 749 acres expected to be converted to agriculture use or urban facilities. Other 1,200 acres not expected to be impacted. Current use expected to continue. *Future*: Approx. 3,104 acres disposed on 8 parcels: M27, 29, 32; UM35, 66-68, & 75. Approx. 197 acres on 3 parcels (M27, UM 68 & 75) likely converted to farmland and 15 acres (Parcel UM67) to housing/industrial. Approx. 2,900 acres no expected effect.	Only 100 acres of 5,200 (3 parcels) retains major components of shrub-steppe community. At completion of all NOALE exchanges, both Phase 1 and future, less than 1% of Columbia Basin Shrub steppe would be transferred to private ownership. Converted acres represent only about 0.01% of total current acreage.
Special Status Plant Species	*Phase 1*: 0 *Future*: n/a	3 Tracking Species (transparent milkvetch, stalked-pod milkvetch, & crouching or Columbia milkvetch). Only latter 2 species on UM20 and 21 have manageable populations.	UM20 and 21 conversion to agriculture, resulting in destruction of these populations. Loss not expected to be detrimental to species.
Wildlife Habitat Old Growth	*Phase 1*: 0 *Future*: unknown	*Phase 1:* 188 acres (7 parcels) Size range: 12-49 acres *Future:* 236 acres (7 parcels) Size range: 15-60 acres	*Net Loss:* 188 acres in Phase 1.
Special Status Wildlife Species	*Phase 1*: 0 *Future*: n/a	*Phase 1 and future*: Potential habitat for long-billed curlew.	Possible habitat for Lewis and pileated woodpeckers and pine marten in both acquisition and disposal parcels.

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Fisheries	Phase 1: 0 Future: 3 miles (including 0.5 mile frontage) on the N. Fork Walla Walla River, which is anadromous and resident trout habitat.	Phase 1: 0.60 miles of perennial streams on 3 parcels (UM10, M8 and M12). Intermittent streams not fish-bearing, nor do they contribute significantly to water quantities of fish-bearing streams. Future: 4.16 miles of perennial streams on 6 parcels (UM35,40,45, 46, 69 and 75). Parcel UM 69 on South Fork of Walla Walla drainage is habitat for rainbow trout and margined sculpin. Intermittent streams on UM75 (about 2 miles) produce surface runoff into Juniper Canyon Creek. Agriculture conversion (UM75) may increase farm chemicals and sediment into perennial streams in UM35 and UM75; no expected effect to fish species in 2 parcels due to dilution when stream enters Columbia River. Intermittent streams in UM40, 43, and 44 (1.15 miles) provide high quality water into UM40 (North Fork Walla Walla River).	Phase 1 and future disposals likely no effect on bull/steelhead trout and margined sculpin.
Recreation	Phase 1: 0 Future: Potential acquisition of 840 acres of forestlands and rangelands on North Fork Walla Walla River that are accessible by hiking trail from Umatilla National Forest. Potential for dispersed recreation.	Dispersed recreation for public on 21 parcels w/legal access would be lost. 13 parcels with public access within 15 miles of Hermiston would be significant loss (8 for Phase 1: UM23-30; and 5 for future exchanges: M27, UM63,66-68).	
Visual Resources	Some potential acquisition lands in VRM Class II.	Disposed parcels no longer in Federal VRM class IIII.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Soils	n/a	Similar to John Day, except sandy soils on many tracts make them more susceptible to wind erosion. Portions of UM25, 26 & 67 have rocky outcrops; no effect in exchange. *Phase 1*: Approx. 584 acres on 11 parcels to agriculture (UM18,20-23,29,30,36-38, & 64); 165 acres on 5 parcels to housing (UM24-28). *Future*: Portions of 3 parcels (197 acres in M27, UM68 &75) likely converted to agriculture. Two parcels likely converted to housing/industrial uses (21 acres in UM63 & 67).	
Prime/Unique Farmland	n/a	*Phase 1*: Approx. 300 acres on 5 parcels (UM18, 20, 21, 24 & 27) expected to be used for agriculture and/or urban residential would be disturbed and dislocated. Minimal impacts after construction complete on Parcels UM24 & 27 likely converted to housing. *Future*: Parcel UM67 (15 acres) likely used for housing/industrial.	
Cultural Resources	4 buildings of unknown condition and historical significance	3 parcels have some cultural materials.	33 of 69 potential disposal parcels surveyed.
Traditional Uses	*Future*: Potential to acquire parcel on N. Fork Walla Walla River, which would enhance access to usual and accustomed fishing stations and traditional use areas.	No site-specific impacts identified.	
Paleontological Resources	n/a	Five parcels near Heppner worthy of further study.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Timber Resources	_Future_: Potential acquisition of 450-acre forested parcel.	_Phase 1_: 416 acres of commercial forestland disposed. _Future_: 291 acres of commercial forestland disposed. Total: 707 acres	Net loss of 257 acres of commercial forestland.
Livestock Grazing	Assumed capacity 8-15 acres/AUM, for total of 56-105 AUMs.	_Phase 1_: On 30 parcels disposed, grazing leases would be canceled and 213 AUMS of forage transferred to private ownership, typically adjoining landowner or lessee. (Parcels: M8, 11, 12, 14, 15, 24, & 26; UM9-11, 13-17, 20-23, 28-33, 36,37,47, 62, & 76). Grazing expected to continue under same management and intensity. Up to 71 AUMs reduced and/or eliminated on 9 disposal parcels (UM 20-23, 28-30, 36 & 37) expected to be converted to agriculture, housing, or industrial use. Eliminate/reduce incidences of unauthorized grazing associated with isolated parcels. _Future_: 3 parcels w/ 229 AUMs (UM12, 35, &75; including 215 AUMs in UM75) transferred to private ownership.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Air Quality	n/a	*Phase 1*: Slight immeasurable degradation of air quality. due to: (1) Characteristics of sandy soils and due to disposal and conversion of portions of 11 parcels to agriculture use during windy conditions (Parcels UM18,20-23,29,30,36-38, & 64).and (2) Conversion of 5 parcels (UM 24-28) to housing, or industrial uses; temporary during construction period. *Future*: Potential for immeasurable negligible impact from disposal and conversion of 5 parcels (3 for agriculture, and 2 for other uses).	
Grande Ronde Basin - Alternative 1			
Exchange	None identified to date.	3,440 acres on 43 parcels Size Range: 40 to 320 acres	
Forestlands	n/a	2,260 acres on 33 parcels (UN1-3, 5,7,9,10,14,16-28, 37-39, 41, 42, 61-64, 68, 69, & 71). Would reduce BLM holdings from 2,856 acres to 635 acres in Upper Grande Ronde Basin.	Retained areas include forested parcels along Grande Ronde River, surrounded by USFS, or with Oregon Trail.
Large Tree Component	n/a	538 acres on 14 parcels (UN3,5,7,26-28,39,41, 42, 62-64, 68, & 71).	Retained areas include 182 acres with large tree component in Upper Grande Ronde Basin.
Rangelands	n/a	Approx. 1,200 acres of rangeland disposed.	
Riparian/Wetland Areas	n/a	*Perennial streams*: 6.25 miles *Riparian areas*: 24 to 42 acres.	
Special Status Plant Species	n/a	None known.	
Wildlife Habitat Old-growth habitat	n/a	Approximately 70 acres of old-growth on 2 parcels (UN27 and 68).	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Fisheries	n/a	3.15 miles of fish-bearing streams (range from 0.3-0.6 miles) Includes 2.3 miles of anadromous) on 9 parcels (UN2, 14, 16, 25, 26, 39, 44, 63, and 64).	
Recreation	n/a	Loss of dispersed recreation on 23 parcels that have legal public access (UN1-4,7, 12, 14, 17, 18, 21, 24-27, 37, 38, 42, 61-64, 68, & 71); loss not expected to affect many users, as 11 parcels are only 40 acres each.	
Visual Resources	n/a	Disposed lands no longer in Federal VRM Class III management.	
Soils	n/a	n/a	
Prime/Unique Farmland	n/a	None.	
Cultural Resources	n/a	Historic properties such as wagon roads & homesteads. Prehistoric resources such as stacked rocks and lithic features. No impact expected.	
Traditional Use	n/a	None identified.	
Paleontological Resources		None likely.	
Timber Resources	n/a	*Future*: 2,260 acres of commercial forestlands disposed.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Livestock Grazing	n/a	*Future*: Grazing allotments would be canceled on 32 parcels (UN3, 7, 9-12, 16-29, 34-39, 41, 42, 61-64); the 254 AUMs of forage transferred to private ownership. Minimal impact expected.	Several parcels are adjacent to National Forests, and some in USFS allotments.
Powder River Basin - Alternative 1			
Exchange	Not identified, to date. Areas of interest: • Snake River Breaks • Lookout Mountain • Pedro Mtn/Morman Basin/ Dooley Mtn/Ebell Creek Divide/Burnt River Canyon • Along Powder River below Thief Valley Reservoir	27,217 acres on 246 parcels Size Range: 2-2,534 acres	Additional parcels may be identified for disposal.
Forestlands	Future: Potential acquisition of forestland in Lookout Mountain and Dooley Mountain areas.	1,971 acres on 66 parcels (all commercial timberlands)	Disposal lands represent less than 0.3% of total forestland in Basin for all ownerships.
Large Tree Component	n/a	*Future*: 471 acres on 23 parcels (B-1,71, 128-130, 135, 138,1 44, 158, 160, 162, 177-179, 184, 193, 197-199, 213, 226, 227, & 240; and UN65).	Retained lands in Powder River Basin include 5,965 acres of forestland with large tree acres.
Rangelands	n/a	Portions of 10 rangeland parcels (approx. 400 acres) could be converted to agriculture use (B5, 29, 45-47, 87, 202, 203, 206, and 218)	
Riparian/Wetland Areas	n/a	Perennial streams: Estimated 8 miles. Intermittent streams: Estimated 16.5 miles Riparian Areas: Estimated 32-56 acres.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Special Status Plant Species	Potential habitat for 2 special status plant species: Snake River goldenweed & Oregon semaphore grass.	Potential habitat for 3 special status species: Snake River goldenweed and Grape fern.	
Wildlife Habitat	n/a	n/a	
Old-Growth Habitat	n/a	147 acres have potential to be old-growth.	
Fisheries	n/a	Not yet compiled.	
Recreation	Areas of interest have dispersed recreation. Lands along river have opportunities for boating and water-related activities.	Dispersed recreation on 61 parcels w/legal access would be lost (only 32 accessible by road). Dispose of 185 parcels that have no legal access.	
Visual Resources	Areas of interest (Snake River Breaks, Lookout Mtn., & Powder River below Thief Valley Reservoir) qualify as VRM 11.	VRM III	
Wild and Scenic Rivers	*Future*: Potential acquisitions along Powder River below Thief Valley Reservoir could bring 1.5 miles of land into Wild and Scenic River System.	None.	
Wilderness	*Future*: Potential acquisitions in northern portion of Snake River Breaks area could be added to Homestead and Sheep Mountain Wilderness Study Areas, enhancing their values.	None.	
Areas of Critical Environmental Concern (ACECs)	*Future*: Potential to acquire lands adjacent to Sheep Mountain, Homestead, or Powder River Canyon ACECs.	None.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Soils	n/a	*Future*: 416 acres on 10 parcels (B-5, 29, 45-47, 87, 202, 203,206, and 218) could be converted to agricultural use, if irrigated.	
Prime/Unique Farmland	Not likely to acquire any.	416 acres on 10 parcels (listed directly above) having soils classified as prime farmland could be converted to agriculture use.	
Cultural Resources	Potential area of interest (Snake River Breaks) has historic sites (1870-1930 circa), including gold mining camps and homesteading sites.	Site types with historic properties such as wagon trails and homestead sites. No site-specific cultural impacts identified.	
Traditional Use Areas	Future: Potential acquisition in the five acquisition areas of interest could consolidate public lands and enhance tribal access to traditional use areas.	No known areas, so no impacts expected.	
Paleontological Resources	Area of interest (Snake River Breaks) has ancient marine formations.	7 recorded sites. Also 70 parcels worthy of further study.	
Timber Resources	n/a	Future: 1,971 acres of commercial forestland on 66 parcels would be disposed. Parcel Size Range: 2 to 160 acres. The disposal would reduce commercial forest base of the Baker BLM Resource Area.	
Livestock Grazing	n/a	Cancel 41 allotments. Transfer 2,448 AUMs of forage to private ownership.	
John Day Basin - Alternative 3			
Exchange	19,200 acres	Approx. 31,000 acres (240 parcels)	
Forestlands	1,160 acres (including JV Ranch)	1,000 acres	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Large Tree Component	370 acres	All parcels with large tree component retained under this alternative.	Greater potential for harvest of large trees on private lands.
Rangelands	n/a	n/a	Cumulative impacts of future exchanges similar to Alternative 1.
Riparian/Wetland Areas	18.5 miles fish-bearing and non-fish bearing streams *Non-perennial streams*: 36 miles	*Perennial streams*: 5 miles *Non-perennial streams:* 21 miles	Net gain 13.5 miles of perennial streams and 54-95 acres of riparian habitat.
Special Status Plants	n/a	2 parcels with arrowleaf thelpody, and some populations of *nevius chaenactis*	
Wildlife	n/a	No site-specific values identified.	Opportunity forgone to acquire North Fork John Day River corridor and tributaries with wintering habitat for 2 special status wildlife species (bald eagle and spotted frog).
Fisheries	17.7 miles of anadromous fish habitat (JV Ranch)	3.6 miles of anadromous fish habitat.	Opportunity forgone to acquire 33 miles fish habitat in contiguous blocks.
Recreation	approx. 20,000 acres (JV Ranch)	Similar to Alternative 1.	Recreational opportunity limited to private landowners on 44,300 acres not acquired.
Access	approx. 20,000 acres (JV Ranch)	Disposal of 15 parcels in Umatilla and Morrow counties that have no access.	
Wild and Scenic Rivers	n/a	none	Opportunity forgone to acquire 3 miles of S.Frk John Day WSR.

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Floodplains	n/a	n/a	Opportunity forgone to acquire 280 acres of floodplains in North and South Forks of John Day River. 10 acres of FEMA-designated floodplains not disposed.
Soils	n/a	Same as Alternative 1.	
Cultural Resources	n/a	n/a	Cumulative effects similar to Alternative 1, except opportunity forgone to acquire culturally significant lands for tribal access and traditional uses on N. Frk. John Day River.
Paleontological Resources	n/a	n/a	Future exchanges likely similar to Alternative 1.
Timber	1,160 acres (about 2.5 MMBF of timber)	1,000 acres (6 MMBF of timber).	
Livestock Grazing	Estimated 1,333-2,500 AUMs transferred to Federal.	21 allotments and portions of 23 other allotments canceled. 2,100 AUMs of forage transferred to private entities.	
Umatilla Basin - Alternative 3			
Exchange	None identified to date. The 840 acres identified for potential acquisition in Alt. 1 would not be acquired in this alternative.	1,030 acres in 22 parcels.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Forestland	n/a	Phase 1: 166 acres of forestland in 6 parcels (M10; UM9-11, 13, & 48). Future: 15 acres in Parcel UM12.	In addition to areas retained along S.Fork Walla Walla River & vicinity of Umatilla Indian Reservation, there would be 14 isolated BLM forested parcels remaining in Umatilla Basin.
Large Tree Component	n/a	No impact.	All parcels with large tree component retained in public ownership.
Rangelands	n/a	Phase 1: Approx. 800 acres disposed. None converted to agricultural, housing, or industrial use. Future: 6 acres (UM63) converted to urban use.	Current agricultural use expected to continue on Parcels M26, 28, and UM32.
Riparian/Wetland Areas	n/a	Phase 1: 0.6 miles perennial streams in UM10. Approx. 1.2 mile of intermittent streams in 3 parcels (UM11, 14, & 39). Future: 0.01 mile perennial in UM69; 0.01 intermittent in UM12.	
Columbia Basin Shrub-steppe	n/a	None.	All parcels with Columbia Basin Shrub-steppe would remain in public ownership. Current agricultural use would continue in M28 and UM32.
Special Status Plant Species	n/a	Parcels having identified special status species would be retained because they have Columbia Basin Shrub-steppe vegetation.	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Wildlife Habitat Old-Growth	n/a	No impact; all parcels with large tree component retained.	
Special Status Wildlife Species	n/a	n/a	Less impact to special status species because fewer parcels disposed.
Fisheries	n/a	*Phase 1*: 0.32 miles of perennial streams (UM10) *Future*: 0.01 mile (UM69)	
Recreation	n/a	*Phase 1*: Loss of dispersed recreation on Parcel UM77 (70 acres) with legal access. *Future*: Loss of dispersed recreation on Parcel UM63 (6 acres) with legal access.	Other 20 potential disposal parcels do not have legal access.
Visual Resources	n/a	Same as Alternative 1.	
Soils	n/a	*Phase 1*: No effect on soils. None of parcels transferred expected to be converted to other uses. *Future*: Parcel UM63 (6 acres) converted to urban use.	Current agriculture use would continue on M26 and 28 and UM32.
Prime and Unique Farmland	n/a	No impact. All parcels having prime and unique farmland (UM18, 20, 21, 24, & 27) would be retained.	
Cultural Resources	n/a	n/a	Traditional use areas for hunting and gathering in Juniper Canyon would be retained in public ownership.
Timber Resources	n/a	*Phase 1*: 166 acres of commercial forestland disposed (Parcels M10, UM9-11, 13, & 48). *Future*: 15 acres of commercial forestland disposed (Parcel UM12).	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Livestock Grazing	n/a	*Phase 1:* Grazing leases canceled on 9 parcels, and 53 AUMs transferred to private ownership (Parcels M14, UM9-11, 13-16, & 47). *Future*: One grazing lease canceled on Parcel UM12; 2 AUMs transferred to private ownership.	
Air Quality	n/a	*Phase 1*: No effect. All parcels with potential for conversion to other use would be retained. *Future*: Negligible impact from Parcel UM63 (6 acres) from its transfer to private ownership and conversion to urban use.	
Hazardous Materials	n/a	n/a	Two parcels (UM26 and 67) adjacent to landfill would be retained by BLM.
Grande Ronde Basin - Alternative 3			
Exchange	None identified to date.	2,200 acres on 29 parcels disposed. Size range: 40 to 240 acres.	All future phases.
Forestlands	n/a	1,426 acres (19 parcels: UN1,2,9, 10, 14, 16-25, 37, 38, 61, & 69). Would reduce BLM holdings from 2,856 acres to 1,430 acres in Upper Grande Ronde Basin.	
Large Tree Component	n/a	No impact.	All parcels with large tree component would be retained under Alternative 3.
Rangelands	n/a	775 acres transferred to private ownership.	
Riparian/Wetland	n/a	Approx. 4.7 miles of perennial streams. Riparian areas: 19-33 acres.	1.55 stream miles and 5-9 acres of riparian areas less than Alternative 1.

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Special Status Plant Species	n/a	None known.	
Wildlife Old-growth Habitat	n/a	No effect. All parcels with old-growth habitat retained under this alternative.	
Fisheries	n/a	1.9 miles of fish-bearing streams (ranging from 0.25-0.6 miles); includes 0.8 miles of anadromous. Five parcels (UN2, 14, 16, 25, & 44).	1.25 fewer miles than Alternative 1.
Recreation	n/a	Loss of dispersed recreation on 13 parcels that have legal public access (UN1, 2, 4, 12, 14, 17, 18, 21, 24,25, 37, 38, & 61). 6 of 13 parcels are 40 acres. Retain 1,040 acres on 10 parcels with legal access.	
Visual Resources	n/a	Same as Alternative 1.	
Soils	n/a	Not compiled yet.	
Prime and Unique Farmlands	n/a	None.	
Cultural Resources (Including Traditional Use)	n/a	Same as Alternative 1.	
Paleontological Resources	n/a	Same as Alternative 1.	
Timber Resources	n/a	1,426 acres of commercial forestland disposed and removed from timber base. Size range: 5 to 235 acres. 19 Parcels (UN1,2,9, 10, 14, 16-25, 37, 38, 61, & 69).	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Livestock Grazing	n/a	Grazing leases canceled on 21 parcels (UN9-12, 16-25, 29, 34-38, & 61), and 149 AUMs of forage transferred to private ownership.	
Powder Basin - Alternative 3			
Exchange	Same as Alternative 1, except less potential to acquire because of reduced acreage of public lands available for exchange.	22,858 acres on 223 parcels. Size range: 2 to 1,120 acres.	All exchanges in future.
Forestlands	n/a	1,359 acres on 43 parcels.	
Large Tree Component	n/a	No effect. All lands with large tree component retained.	
Rangelands	n/a	Same as Alternative 1.	
Riparian/Wetland Areas	n/a	Data not compiled yet.	
Special Status Plant Species	n/a	Same as Alternative 1.	
Wildlife Habitat	n/a	Same as Alternative 1	
Old-growth Habitat	n/a	No effect. All parcels with old-growth habitat retained in public ownership.	
Fisheries	n/a	Not yet compiled.	
Recreation	n/a	Dispersed recreation lost on 51 parcels with legal access (29 accessible by road). Dispose of 172 parcels that have no legal access.	
Visual Resources	n/a	Parcels disposed would no longer have Federal VRM Class III management.	
Special Designated Areas (Wild & Scenic Rivers, Wilderness, and ACECs)	n/a	None	

Table 4-1. Summary of Expected Environmental Consequences by Basin and Resource Value (Alternatives 1 and 3).

	Acquisition Lands	Disposal Lands	Comments
Soils	n/a	Same as Alternative 1.	
Prime and Unique Farmlands	n/a	Same as Alternative 1. 10 parcels with prime and unique farmland soils disposed.	
Cultural Resources (including Traditional Use Areas)	n/a	Same as Alternative 1.	
Paleontological Resources	n/a	n/a	
Timber Resources	n/a	1,359 acres of commercial forestland transferred to private ownership. Size range: 2-160 acres.	
Livestock Grazing	n/a	36 grazing allotments canceled, and 2,380 AUMs transferred to private ownership.	

n/a = Data not available/unknown; contingent on identification of acquisition parcels or further inventory of disposal parcels.

- Increased access for managing public resources with larger, contiguous blocks of land being acquired.
- Access to more public lands for general public to pursue recreational opportunities.
- Better opportunity to manage resources, such as riparian/wetland areas, due to having longer stream segments on acquired lands than on disposed lands.
- Better opportunity to implement ecosystem management by acquiring large blocks of contiguous lands adjacent to National Forest lands and fewer small, isolated parcels.
- Reduced administrative costs and fewer unauthorized grazing uses due to transfer of remote isolated rangelands.
- Fewer trespasses due to having public lands that offer public access.

These benefits are addressed in more detail in the resource sections.

Interest and User Group Satisfaction

The general public would benefit in the proposed land tenure adjustments by having access to more public land for pursuing various recreational activities. Under the current situation (Alternative 2-No Action), about 80 percent of the remote isolated parcels proposed for disposal have no public access. The proposed exchange under Alternative 1 would dispose of 90 parcels (15,190 acres) with public access and acquire 18 parcels (47,400 acres) with good access. There would be improved public access under Alternative 3, but to a considerably lesser degree, with only 34 parcels (9,900 acres) with public access disposed, and 1 parcel with 19,240 acres accessible to public being acquired.

In cases involving disposal of rangelands to private ownership, the livestock lessees would benefit by having the leased parcels transferred. Under Alternative 1, there would be 125 allotments transferred to private ownership and 5 allotments acquired, compared to Alternative 3 which would have only 50 allotments transferred and 1 allotment acquired.

Plan Maintenance for Baker Resource Management Plan

Alternatives 1 and 3: Implementing the plan maintenance of the Baker Resource Management Plan proposed under Alternatives 1 and 3 would clarify the land tenure adjustment strategy and provide greater assurance that lands with important resource values would remain in public ownership.

Alternative 2: Retaining the existing land tenure guidance in the Baker RMP may allow more flexible interpretation with regard to retention or disposal of public lands.

Alternative 1 - Resource Impacts Common for all Basins

Alternative 1 impacts common for all basins have been identified for Forestlands, Rangeland, Wildlife Habitat (including old-growth habitat), Fisheries, Cultural and Paleontological Resources, Visual Resources, and Livestock Grazing.

Forestlands: Common for All Basins (Alternative 1)

The blocking of Federal ownership into larger parcels and disposal of small parcels would facilitate development of more healthy forests, primarily through more effective implementation of forest health prescriptions, insect control, and fire reintroduction on a landscape basis. Management of larger forest stands, contiguous with National Forest lands, would also facilitate forest management options consistent with ecosystem management principles and Best Management Practices (see glossary), as outlined in the Interior Columbia Basin Ecosystem Management Project (ICBEMP).

Rangelands: Common for All Basins (Alternative 1)

Disposed rangeland parcels would typically be transferred to the adjoining landowner or lessee. Therefore, grazing is expected to continue with the same management and intensity as is done presently.

Wildlife Habitat: Common for All Basins (Alternative 1)

This analysis collectively addresses all four basins in the Northeast Oregon Assembled Land Exchange due to their similar environmental consequences for wildlife resources and special status wildlife species. Any information, assumptions, and interpretations specific to unique habitats or species and basins are specified accordingly.

Vertebrate wildlife species are only a very small part of the faunal community within any ecosystem. Because of the preponderance of scientific information and the societal values placed on many of these more visible and charismatic species, the majority of this evaluation is limited to consequences to vertebrate wildlife species and their habitats. The BLM recognizes the importance of many biotic and abiotic processes to the functioning and sustainability of regional ecosystems. This discussion, however, will be confined to vertebrate wildlife species and habitats since our knowledge and understanding of other processes and their functions in the ecosystem is somewhat limited.

Many parcels identified for disposal in the EIS area are small and isolated. It is assumed that management practices (such as grazing) and resource conditions on sagebrush steppe, juniper steppe, and riparian habitats would remain relatively unchanged for most parcels when ownership is transferred from public to private ownership.

Acquisition of lands, such as those along the North and South forks of the John Day River in the John Day Basin, would allow the BLM to manage a large block of land for wildlife species needs, instead of focusing on numerous small isolated parcels. This focus links directly to the concept of ecosystem management that the BLM has adopted as a guide in managing public land resources. The proposed exchange of smaller parcels for larger blocks of land would allow the BLM to manage the newly acquired lands to protect biodiversity, and to manage more specifically for those species or habitats of concern on the east side of the Cascade Mountain Range.

Old-Growth Habitat

In Phase 1 approximately 1,127 acres of forestlands with old-growth characteristics would be disposed within the John Day (939 acres) and Umatilla (188 acres) basins on 38 parcels (Appendix B, Table B-5). Most forest stands with old-growth characteristics on disposal parcels are small, isolated patches with highly fragmented habitat. The stands range from 6 to 100 acres in size, and average 30 acres. Approximately 600 acres of old-growth forest habitat could be acquired (John Day Basin).

In future exchanges, approximately 1,787 acres of forest lands with old-growth characteristics would be disposed within the John Day (1,334 acres), Umatilla (236 acres), Grande Ronde (70 acres) and Powder (147 acres) basins on 30 parcels (Appendix B, Table B-6). Approximately 270 acres of old-growth forest habitat could be acquired (John Day Basin). Additional acreage may be acquired in other basins.

Loss of live standing, dead standing, and downed deadwood due to harvesting on disposal lands could have negative impacts on insectivorous bird populations that consume significant numbers of the two major defoliating insect pests in the Northwest's Douglas-fir forests: tussock moth and western spruce budworm (Torgerson et al. 1990). Bird predation alone on tussock moth larvae can reduce egg survival as much as 70 percent. Two old-growth forest associated species (red-breasted nuthatches and golden crowned kinglets) are among the main predators on tussock moth and spruce budworm. Many birds that prey on these pests are influenced by the availability of standing and downed deadwood.

Reduction of snags (especially those greater than 21 inches DBH) and dead downed logs would also have significant impacts on woodpecker species. Pileated woodpeckers need large standing deadwood (snags) in which to excavate nesting cavities, and large dead standing or downed logs for foraging. Pileated woodpeckers are primary excavators that create nesting cavities for up to 45 secondary cavity nesters, including 27 birds and 18 mammals (Thomas et al. 1979). Among the secondary cavity-nesting species are American kestrel, mountain chickadee, Lewis woodpecker, saw-whet owl, northern flicker. Mammal cavity-nesting species are short-tailed weasel, yellow pine chipmunk, little brown myotis, long-eared myotis, long-legged myotis, silver haired bat, big brown bat, northern flying squirrel, and bushy-tailed wood rat (Appendix B, Table B-1).

Old-growth patch sizes on disposal lands are generally too small to maintain viable populations of many forest vertebrate wildlife species (see discussion for wildlife resources common to the NOALE area). Species that have small home ranges or are relatively immobile (such as amphibians and small rodents) may be impacted more negatively than species that have larger home ranges (such as elk, black bear, cougar, marten, and eagles). The degree of impact would depend on the adjacent vegetation community, edge, and seral stage. For example, old-growth associated species with small home ranges would be impacted to a greater extent from the harvest of old-growth habitat if the surrounding landscape were grassland/rangelands, rather than early seral forestlands.

The extent of the effects of fragmentation due to the present pattern of scattered BLM parcels on many bird species is not known. For analytical purposes, the BLM assumes that many fragmented habitats that produce more edge habitat have some negative effects on some bird species. Small isolated patches typically produce more edge habitat, therefore the diversity of species typically increases. This edge effect was thought to occur because an edge has greater vegetation structural complexity and reflects the juxtaposition of different habitat types, each of which may supply different needs of species (Martin 1992). However, edge and habitat fragments are often thought to represent "ecological traps" (Gates and Gyusel 1978) where species are attracted to the greater structural diversity of habitat at edges, but suffer lower reproductive success at these edges. Consequently, although species may be present in disturbed conditions, the demographic viability of their populations may be low (Martin 1992).

The influx of edge-adapted opportunists, such as brown-headed cowbirds, may contribute to the negative effects observed on these species. These edge-adapted opportunists may temporarily increase overall species richness, or number of species, but only at the expense of forest interior species (Noss 1983). Lowered reproductive potential from decreased numbers of broods lowers the species' ability to respond to population disturbances, such as increased nest predation or brown headed cowbird parasitism, that might arise from fragmentation (Martin 1992). Analysis of these types of natural processes show the benefits of managing large parcels of habitat, instead of smaller fragmented blocks.

Considering the BLM's emphasis on ecosystem management, wildlife habitat was analyzed on a landscape scale with focus on current conditions and potential of areas to host such habitats as old-growth forests. The large blocks of contiguous habitat that would be acquired within the boundaries of the project area would be more beneficial to wildlife species and biodiversity as a whole, than would unmanageable small isolated patches of habitat now in the landscape.

Cumulative Impacts: During recent history, human activities have altered landscapes in northeast Oregon. Urbanization, logging, road building, agriculture, livestock grazing, and fire suppression have all contributed to the degradation of wildlife habitat in the region. These various activities have fragmented habitats, lowered their quality and quantity, and in some cases eliminated the habitat. These impacts have reduced the potential of native species to sustain their biological diversity.

Timber harvesting practices across the landscape have reduced forest complexity. The timber harvesting has also caused large scale fragmentation, not only for some vertebrate wildlife species, but for future genetic transfer for all living organisms that help sustain the integrity and health of forested ecosystems. Factors that have shown increased threats to forest health are wildfire, pests, and disease.

Only between 10 and 15 percent of the old-growth forests remain in eastern Oregon (Henjum et al. 1994). The loss of 1,127 acres in Phase 1 would add to the cumulative reduction of old-growth forests in eastern Oregon. Although continued logging would reduce overall old growth acreage, the cumulative impacts to this resource and the wildlife species relying on this resource would be minimal. In the John Day Basin, for example, the BLM-administered lands considered for disposal that have old growth comprise only 0.5 percent of the old growth in the basin; the Forest Service manages a large proportion of old growth that would fulfill old-growth wildlife habitat needs. There would be some effects on species distribution, abundance, and diversity and also possible impact on population viability, especially for less mobile species.

In summary, there would be a loss of 1,127 acres of old-growth forest on disposal parcels in Phase 1, but a gain of 600 acres on acquisition lands. In the short term, the exchange would represent a net loss of 527 acres to wildlife species closely associated with the old-growth habitat type.

Fisheries Impacts: Common for All Basins (Alternative 1)

Likely impacts to the streams within disposal forested parcels from expected timber harvest (likely within 5-10 years after disposal) would include reduced shade, increased sedimentation, less large wood recruitment, and slightly increased water temperatures.

Any timber harvest on the disposal forested parcels that are not adjacent to fish-bearing streams may have post-harvest effects on downstream fish habitats. Road construction related to logging can affect streams directly by accelerating erosion and sediment loading, by altering channel morphology, and by changing the runoff characteristics of watersheds. These processes interact to cause secondary changes in channel morphology. All of these changes affect fish habitats (Chamberlin et al. 1991).

By blocking land ownership and increasing contiguous stream miles, BLM can more easily implement management strategies that facilitate fish habitat improvement. A shaded riparian/stream reach has the potential to decrease water temperatures. For example, 0.25 mile of shaded stream may improve riparian habitat and bank storage, but not decrease water temperatures. In contrast, a 10-mile shaded stream will decrease water temperature within that 10-mile reach and extend the cold water plume further downstream. This will increase the available habitat for cold water fisheries. Blocking lands next to National Forest lands facilitates cooperative management of fishery habitats from a watershed approach.

Soils Impacts: Common for All Basins (Alternative 1)

Soils on disposed forested parcels could be impacted by private timber harvest operations that would expose soils to erosion. These impacts would depend on the extent and prescription of the harvest, construction of roads, time of year, and other factors. Compliance with State Forest Practices Act would minimize these impacts. On acquired and retained parcels managed by the BLM, soil impacts are expected to be minimal due to using best management practices to reduce soil impacts.

Cultural Resource Impacts: Common for All Basins (Alternative 1)

Traditional Use Areas: Disposal of Federal lands would reduce or eliminate opportunities for tribes to use certain parcels for such traditional uses as hunting, plant gathering, grazing, subsistence, and religious activity. However, treaty-reserved rights and traditional uses would apply to all newly acquired lands, which would potentially reduce the effect of land disposal on tribal interests. Treaty rights to fish at usual and accustomed locations are unaffected by land transfers to non-Federal ownership.

Although specific root gathering fields have not been identified as yet on lands to be acquired, the diverse habitats found in the area are an indicator of the occurrence of culturally important plant and animal species. Habitats on lands to be acquired include perennial streams with anadromous and resident fish habitat, upland lithosol plant communities, ponderosa pine and mixed conifer forestlands, and important summer and winter wildlife habitat. Over the long term, habitat improvement on these land acquisitions could increase the potential for harvest of fish and wildlife species of importance to tribal communities.

Although approximately 80 percent of Federal parcels have no current public access, opportunities to acquire future access are usually forgone when lands are transferred into private ownership. After the land is exchanged from public to private, access for tribal uses would be subject to arrangements between the tribes and new property owners.

Paleontological Resources Impacts: Common for All Basins (Alternative 1)

The inventory and evaluation of localities of vertebrate, botanical, and possibly invertebrate fossils as part of this exchange proposal would protect any resources that are located.

Recreation Impacts: Common for All Basins (Alternative 1)

Recreational use is not available to the public on most of the parcels considered for disposal because of lack of legal access. Acquired areas are expected to be in areas with legal access or areas that will provide new legal access, as well as block ownership that will improve recreation opportunities.

Visual Resources Impacts: Common for All Basins (Alternative 1)

Disposed lands presently under VRM Class III management would no longer carry that Federal designation. They would be open for a variety of uses and possible alteration to the landscape.

Livestock Grazing Impacts: Common for All Basins (Alternative 1)

The improved land ownership pattern resulting from the exchange, with BLM-administered lands being more blocked and not as scattered as in the present situation, would create opportunities for improved management. Disposal of remote isolated rangeland parcels would result in fewer incidences of unauthorized use.

Alternative 2 (No Action) - Impacts Common to All Basins

Alternative 2 impacts common to all basins have been identified for forestlands, rangelands, riparian/wetland areas, wildlife habitat, fisheries, recreation, cultural and paleontological, timber, and livestock grazing.

Forestlands: Common For All Basins (Alternative 2)

Under Alternative 2, ownership of commercial forestlands would be unchanged in the short term. Over the long term, however, smaller land exchanges may occur, which would affect portions of the same forestlands. Management of forested parcels would continue as outlined in the three RMPs (John Day, Two Rivers, and Baker). Long-term impacts would be similar to Alternative 1, except on a smaller scale.

The isolated and scattered public land ownership pattern would remain. Without management or fire treatments, overstocked forest stands may become less vigorous and more unhealthy due to vegetative competition. Lack of fire would perpetuate these conditions until another process (such as disease or insect outbreak) cleanses the stand.

The opportunity for BLM to consolidate its forestlands into large blocks of stands adjacent to National Forest lands would be forgone or very limited. The opportunity to implement more efficient ecosystem management practices on forestlands in the North Fork John Day River subbasin would be lost.

Large Tree Component: Under the No Action Alternative, the number of acres of BLM forestlands with large tree components would not change. Future land exchanges may affect forestlands with large tree components similar to Alternative 1, but at a smaller scale.

There would be more potential for harvest of the large trees remaining on the private lands than those currently on the public lands. Some large trees on BLM-administered lands would be harvested, which would be addressed in timber management plans.

Rangelands: Common For All Basins (Alternative 2)

Little change would occur from the current condition. Scattered parcels of rangelands would be retained under Federal management. The opportunity to substantially increase management efficiency and influence on rangeland allotments would be forgone.

Riparian/Wetland Areas: Common For All Basins (Alternative 2)

Under Alternative 2, it is unlikely that any coordinated management of riparian habitats or appreciable improvements in their condition would occur in the foreseeable future. All lands would continue under current management practices, with little or no improvement of riparian habitats occurring.

Riparian areas on public lands would remain disconnected and difficult to manage for wildlife and fisheries values. Even with more conservative grazing management strategies, intensive compliance and monitoring would be needed annually to effectively implement restoration processes. Their condition would continue to be influenced primarily by adjacent landowners. The limited riparian habitat management funds would continue to be used for high priority areas where BLM-administered lands are blocked and contain sizeable segments of fish habitat.

Wildlife Habitat: Common For All Basins (Alternative 2)

The No Action Alternative would not change the current management of wildlife resources on BLM-administered lands in the project area. The juxtaposition of all sagebrush steppe, juniper steppe, riparian, and coniferous forest habitats on BLM-administered land would remain in a scattered, fragmented pattern across the landscape. Wildlife resources on these lands would continue to be very difficult to assess, monitor, and manage and also would continue to be influenced by land practices applied by adjacent landowners. The cumulative effect of management activities and habitat changes on BLM-administered lands within the landscape would be minimal because of the present pattern of habitat fragmentation and small acreage involved.

No loss in acreage of parcels with old growth characteristics would be observed. The BLM would have reduced opportunity, for an indefinite time, to manage larger contiguous blocks of public land with a diversity of habitat types including old growth, coniferous forest habitat containing large trees, and riparian areas. Under the No Action Alternative, ecosystem management and management of wildlife resources would continue to become more difficult than under Alternative 1.

Fisheries: Common For All Basins (Alternative 2)

Disposal parcels containing fishery resources would remain difficult for the BLM to manage. Livestock grazing practices on these short stream segments would continue to be determined largely by adjacent landowners unless parcels are segregated by fencing. Stream habitats in poor condition likely would not change, and others that are in fair or good condition would likely remain the same also. Limited riparian habitat management funds would continue to be used for high priority areas where BLM-administered lands are blocked and contain sizeable segments of fish habitat.

Recreation: Common For All Basins (Alternative 2)

Recreational opportunities on most identified acquisition lands would remain limited to the private landowners. Recreational opportunities currently available to the public via ODFW easement would not be affected.

Retention of lands considered for disposal would not impact current recreational opportunities. Due to the limited legal public access on approximately 80 percent of the disposal parcels, most of these public lands would continue to be accessible only to adjacent landowners. Recreation opportunities on those parcels with public access would continue to be limited because of their small size and configuration.

Cultural Resources: Common For All Basins (Alternative 2)

No short-term impacts to cultural resources are expected. However, future exchanges would likely result in cumulative impacts similar to Alternative 1, but on a smaller scale over a longer period of time.

Paleontological Resources: Common For All Basins (Alternative 2)

No impacts are expected. Surveys done preliminary to disposal, along with the measures to take if such resources are located, are expected to provide adequate protection for paleontological resource values.

Timber Resources: Common For All Basins (Alternative 2)

Under Alternative 2, the isolated public forestland parcels would be managed as is currently done, which is as opportunities arise or after damage occurs from insects, disease, or wildfire. Problems associated with management of small parcels (such as timber theft, access limitations, costly timber management operations, and insect damage from stand neglect) would continue.

Livestock Grazing: Common For All Basins (Alternative 2)

Private lands would continue to be grazed at current levels. The chance to eliminate administration costs on over 100 grazing allotments would be forgone. Grazing practices on many disposal lands would largely be controlled by the surrounding private land operations, since BLM is usually a minority landowner in these allotments.

Alternative 3 - Impacts Common For All Basins

Common impacts for all basins (Alternative 3) have been identified for forestlands, rangelands, riparian/wetland areas, wildlife, fisheries, recreation, cultural and paleontological, timber, and livestock grazing.

Forestlands: Common For All Basins (Alternative 3)

Over the long term, smaller land exchanges may occur, which would affect portions of forestlands that do not contain a large tree component. Long-term impacts would be similar to Alternative 1.

The isolated and scattered public land ownership pattern would largely remain unchanged. Expected impacts would be similar to the No Action Alternative, with the absence of fire and management resulting in less healthy forest stands. Most private forestlands not acquired by BLM would remain under intensive management of private landowners and timber companies.

The opportunity for the BLM to consolidate public forestlands into large blocks adjacent to National Forest lands would be limited.

Large Tree Component: Under Alternative 3, all forested parcels with a large tree component would be retained in public ownership. Any future BLM timber harvest plans would consider effects on the large tree component. Compared to large trees on public lands, the large trees remaining on private lands would have greater potential to be harvested under Alternative 3. As in Alternative 1, there would be some harvest of large trees on BLM-administered lands through timber management plans.

Rangelands: Common For All Basins (Alternative 3)

No impacts are expected to rangelands in the short term. However, future land exchanges would likely result in cumulative impacts similar to Alternative 1, but on a smaller scale over a longer period of time.

Riparian/Wetland Areas: Common For All Basins (Alternative 3)

Because fewer parcels would be acquired under this alternative, the BLM would acquire fewer stream miles and riparian acres than under Alternative 1. Effects to riparian habitat from timber harvesting on disposal lands would be similar to those described in Alternative 1, but on a smaller scale.

Wildlife Habitat: Common For All Basins (Alternative 3)

Under Alternative 3, fewer acres of all habitat types would be blocked in the project area for Phase 1 and future transactions. The future benefits of having larger blocks with a large tree component, including some with old-growth characteristics, would be recognized at a much smaller scale. The majority of the acquisition land with riparian habitat would not be acquired.

Old-growth Habitat: Coniferous forest parcels with large trees would be retained. No loss in old-growth habitat would be observed, as these are included in the parcels with a large tree component. The fragmented nature of these parcels would continue to be a concern because of their management difficulties. Wildlife species associated with the habitat on these parcels would not be displaced in most instances. The ability of these parcels to support viable populations of many wildlife species would still be in question because of their juxtaposition in relationship to other habitats and the effects of edge-adapted opportunist species on native wildlife species (see discussion on disposal lands for Alternative 1).

Fisheries: Common For All Basins (Alternative 3)

Because there would be fewer land exchanges with Alternative 3, the BLM would acquire fewer stream miles under this alternative compared to Alternative 1. Retained disposal parcels that contain fishery resources would remain difficult for the BLM to manage. These short stream segments of fish habitat would continue to be influenced primarily from the management practices of the adjacent landowners if they are not segregated from the private lands by fencing. Stream habitats in poor condition likely would not change, and others that are in fair or good condition would likely remain the same also. Limited riparian habitat management funds would continue to be used for high priority areas where BLM-administered lands are blocked and contain sizeable segments of fish habitat.

Recreation: Common For All Basins (Alternative 3)

Public recreation opportunities would be forgone on the lands that are disposed. However, considering the limited public access on these parcels (80% with no legal public access), the loss of these recreational opportunities is expected to affect few public land users.

Cultural Resources: Common For All Basins (Alternative 3)

The opportunity to acquire other traditional use areas within the NOALE area would be more limited with Alternative 3 than with Alternative 1.

Paleontological Resources: Common For All Basins (Alternative 3)

Phase 1 exchanges are not expected to impact paleontological resources. However, future land exchanges would likely result in cumulative impacts similar to Alternative 1, but on a smaller scale over a longer period of time.

Timber Resources: Common For All Basins (Alternative 3)

The future outlook would be to continue to manage most isolated disposal parcels as opportunities arise or to manage the timber resource after damage occurs from insects, disease, or wildfire. Problems associated with management of small timber parcels (such as timber theft, access limitations, costly timber management operations, and insect damage from stand neglect) would continue.

Socioeconomics Impacts of Proposed Exchange

Tax Impacts of Exchange: As stated in Chapter 3, local county property tax rates, assessments, and the resulting revenue would be greatly influenced by state tax law and the passage of Ballot Measure 47. The BLM has no direct influence in taxation matters. The two exchange proposals being considered would change the acres of private land subject to property tax in each county. Exchange of properties would be based on equal fair market values. The net effect on assessed value and final property tax collections would be the result of county government decisions to grant farm and forest deferrals and the assessed value assigned to any former Federal lands that are developed for commercial or residential use after entering private ownership. This EIS does not address decisions that are the purview of state and county governments.

The two exchange proposals being considered would also change the acres of Federal lands in each county. Payment in Lieu of Taxes to each county would be marginally affected. Historically, the PILT rate for all affected counties is $0.10/acre. Table 4-2 displays FY '92 PILT payment, the net change in Federal acres, the change in projected PILT payment in dollars, and percent of historic payments for Phase 1 activities. Except for Umatilla County under Alternative 1, all changes are less that 1 percent for the exchange proposals. Recent legislation (P.L. 103-397) has the potential to more than double PILT payments by the year 2000, to $0.22/per acre, if funds are appropriated to make the authorized payments. This would have a much greater impact on county revenue sharing than either of the exchange proposals.

In addition to the PILT payment impacts, the commodity collection portion of revenue sharing with the county will also be subject to change. Within the exchange area revenue sharing of commodity collections is dominated by timber revenues, primarily from the National Forests. Under Alternatives 2 and 3, which retain federal forest lands managed by BLM, any revenue generated by harvest on these lands would be shared with the local county. It is unlikely that commodity revenues from timber harvest, mining, or grazing on BLM-managed lands would change significantly from historic levels under either of the exchange proposals, or the No Action Alternative.

Timber Harvest: Under the proposed exchange alternatives, the acres and volume of merchantable timber managed by the BLM varies by county. The appraised value of the timber was included when establishing the fair market value of each parcel and the Federal government received in return lands of equal value but with different mix of resources. The forested acres proposed for exchange into private ownership are isolated and unlikely to be harvested under Federal management. Adjoining landowners and regional timber companies would be most likely to cost effectively harvest lands they acquire. There is a potential that the exchange would cause additional timber volume to flow to local processing facilities in the short term (10 years).

Under Alternative 1 (Phase 1), BLM holdings of forestlands would increase by approximately 3,000 acres. However, BLM held merchantable timber volumes would experience a net decrease of approximately 15,000 MBF in Grant, Wheeler, Morrow, and Umatilla counties. A total of 18,280 forested acres would change ownership under this alternative. Morrow and Umatilla counties would experience net increases in BLM managed forest acres and associated increases in timber volume. Grant County would experience a net increase in BLM-managed forest acres, but a net decrease in BLM held timber volume. Wheeler County would experience a net decrease in BLM-managed forest acres and associated decrease in timber volume. Volumes entering private ownership by county under Alternative 1 are as follows: Grant (50,549 MBF), Morrow (2,568 MBF), Umatilla (2,681 MBF), and Wheeler (3,939 MBF), for a total of 59,700 MBF. No volume enters private ownership in Baker or Union counties during Phase 1 of this alternative. BLM would acquire the following volumes by county: Grant (32,700 MBF), Morrow (4,082 MBF), Umatilla (8,018 MBF), for a total of 44,800 MBF. BLM would not acquire any timber volume in Wheeler, Baker, or Union counties under Alternative 1.

Alternative 2 (No Action) would not change the distribution or pattern of forested acres between BLM and private landowners.

Alternative 3 (Phase 1), an alternative designed to maintain large diameter forestlands in Federal ownership, would result in no significant change in forestland ownership in Grant, Wheeler, Morrow, and Umatilla counties. However, there would be a net decrease of 6,330 MBF of BLM held timber

Table 4-2. Net Change in PILT by County and Alternative (Phase 1)

County	FY '92 PILT	Net Change Acres, Alt. 1	Change PILT, Alt. 1	% Change PILT, Alt. 1	Net Change Acres, Alt. 3	Change PILT, Alt. 3	% Change, PILT, Alt. 3
Baker	$101,795	n/a	n/a	n/a	n/a	n/a	n/a
Grant	174,748	(13,660)	($1,366)	-0.78%	(6,580)	($658)	-0.38%
Morrow	15,431	462	$46	0.30%	(898)	(89)	-0.58%
Umatilla	41,676	6,572	$657	1.58%	(2,265)	($226)	-0.54%
Union	62,312	n/a	n/a	n/a	n/a	n/a	n/a
Wheeler	30,373	(2,050)	($205)	-0.67%	n/a	n/a	n/a
Total	$426,335	(8,676)	($868)	-0.43%	(9,743)	($973)	-1.50%

n/a = No Phase 1 activity in this county.
Source of FY '92 PILT: Schmit and Rasker

volume. A total of 2,326 forested acres would change ownership under this alternative. Umatilla and Grant counties would experience losses in BLM held forest volume. Due to the quality and type of timberland exchanges in Grant County, BLM forested acres would experience no change in acres despite the net loss of timber volume. Volumes entering private ownership under Alternative 3 would be as follows: Grant (8,000 MBF) and Umatilla (830 MBF), for a total of 8,830 MBF. No volume enters private ownership in Baker, Union, Wheeler, and Morrow counties under this alternative. BLM would acquire the 2,500 MBF in Grant County and no timber volume in Wheeler, Baker, Morrow, Umatilla, or Union counties under Alternative 3.

For analysis purposes, it has been assumed that the forested acres entering private ownership through the exchange would be harvested within 10 years. Although some of these lands have the potential for residential development that would favor retaining a forest setting, private timber companies desiring to block up holdings are the most likely parties to acquire these lands.

The employment effect of an additional annual volume of approximately 1.5 MMBF under Alternative 1 (15 MMBF over 10 years) and 0.63 MMBF (6.3 MMBF over 10 years) under Alternative 3 during the next decade is expected to be minimal. Assuming an estimated 7.5 jobs per million board feet, about 11 additional timber industry jobs would be generated or maintained within the region under Alternative 1 over the next 10 years. Using the same assumption for Alternative 3, about 5 additional timber industry jobs would be generated or maintained over the next 10 years. Where these jobs would be located is uncertain and would be the result of private business decisions beyond the scope of BLM management. Given current harvest trends, particularly decreases in USFS timber harvest rates, it is unlikely that this additional harvest would generate new jobs. More likely, the available volume would allow continued mill operation and employment that would otherwise be lost.

Livestock Industry Impacts: Under both Alternatives 1 and 3, the BLM would exchange into private ownership greater livestock productive capacity, expressed in animal unit months (AUMs), than it would acquire.

Under Alternative 1, approximately 6,350 BLM AUMs would be transferred to private ownership. A range of 4,340 to 8,130 AUMs could be permitted on acquisition lands.

Under Alternative 2 (No Action), there would be no change in the pattern or distribution of grazing lands between BLM and private ownership.

Under Alternative 3, approximately 2,150 BLM AUMs would be transferred to private ownership. A range of 1,330 to 2,500 AUMs could be permitted on acquisition lands.

There would be no expected change in the size of economic importance of the livestock industry within the analysis area due to the exchange proposals. This is because of the expectation that adjoining landowner/permittees would acquire parcels with existing livestock use and continue that use into the future. An estimated 125 permits, mostly custodial class with minimal BLM management, would be retired. Lands acquired by BLM through exchange would generally be adjacent to BLM parcels with existing livestock use. It is anticipated that livestock use would be allowed on these acquired parcels by expanding existing permits and creating five new allotments.

The efficiency and productivity of livestock operators who acquire lands may be improved, but this cannot be accurately predicted. The efficiency of BLM management may be improved and grazing lands are consolidated and the number of permits to administer is reduced. The Vale and Prineville Districts have not made any estimates of cost savings.

Socioeconomics Impacts Associated With Recreational Access and Opportunities: Under Alternative 1, recreation access for the general public would be improved as Federal lands are blocked up and legal access via existing roads is made possible. Dispersed uses such as camping, fishing, horseback riding, mountain biking, nature study, and wildlife viewing would be enhanced. The number of new visitors to the region that would be generated is anticipated to be minimal. No new recreation facilities are planned on acquired lands as part of this EIS. Landowners adjoining Federal parcels identified for disposal under Alternative 1 may be negatively impacted. Their almost exclusive access to isolated public parcels will be terminated when these lands enter private ownership. In addition, the lands may be posted by the new owners. The value of private parcels owned for recreation uses may be diminished if proximity of Federal lands is considered a component of the desirability and value of the parcel.

Under Alternative 2 (No Action), recreation opportunities would remain the same as the current situation.

Under Alternative 3, access for the general public would be improved in several locations, particularly in the North Fork John Day River drainage. The extent of the improvement would not be as great as under Alternative 1. No new recreation facilities are planned on acquired lands as part of this EIS. Private landowners adjoining BLM parcels with large diameter trees would be unaffected under this alternative because these parcels would no longer be identified for disposal. They would still have direct access to isolated public parcels. Recreation property values associated with abutment to Federal lands would be maintained. Private landowners adjoining grazing and low quality timberlands identified for disposal would be affected as in Alternative 1.

Environmental Consequences in John Day Basin

Alternative 1 (*Preferred Alternative)*

In this alternative, there would be 419 parcels disposed (approximately 46,000 acres Phase 1 and 8,000 acres in future exchanges). See Maps 1-4; Table 4-1; and Tables A-1a and A-1b in Appendix A. The potential acquired acreage under this alternative would be approximately 68,700 acres total (47,400 acres in Phase 1 and 21,300 in future exchanges). Reference beginning of Chapter 4 for Resource Impacts Common to All Basins and Socioeconomic Impacts for All Basins.

Forestlands

Phase I: Alternative 1 would dispose of approximately 7,230 acres of BLM-managed public forestlands in the John Day Basin that are generally isolated and scattered throughout four counties: Grant, Wheeler, Umatilla and Morrow. In exchange, the BLM would acquire 10,634 acres of forestlands that are blocked along the North Fork John Day River and tributaries. The acquisition lands are adjacent to the Umatilla National Forest and scattered BLM-administered parcels being retained.

The average size of the forest stands is 30 acres for the potential disposal parcels, and 205 acres on the potential acquisition lands.

Large Tree Component: In Phase 1, a total of 4,111 acres of forestlands having large trees would be disposed on scattered parcels. However, approximately 4,810 acres of forestlands containing a large tree component would be acquired, resulting in a net gain of approximately 700 acres. The stocking levels of large trees on disposal lands average 5 to 9 trees per acre. In contrast, the stocking levels of large trees on acquired lands average 3 to 5 trees per acre. As a net result, BLM would have fewer large trees on the acquired forestlands, but would have a net increase in forested acres and in larger blocks. Complete cruise data will be available on all Phase 1 exchange lands before the final NOALE EIS is released.

Future Exchanges: Additional forestlands totaling 8,740 acres are being considered for acquisition on Rudio Mountain (7,380 acres) and in the Buckaroo Flats area, including Jericho and Rush Creek drainages, (1,360 acres). The Rudio Mountain potential acquisition area would block into BLM parcels, filling most gaps in the BLM's land ownership pattern. The lands in Buckaroo Flats would tie into Phase 1 acquisition lands along the North Fork John Day River. Approximately 3,941 acres of forestlands on 36 parcels would be disposed, mostly from the southeast portion of Rudio Mountain. BLM would have a net gain of 4,799 acres of forestlands.

Large Tree Component: Approximately 2,315 acres of disposal forestlands contain large trees, and about 2,390 acres of acquisition forestlands contain large trees at various stocking levels. This exchange would result in a net gain of 75 acres of forestlands with a large tree component coming into BLM management.

Rangelands

Phase I and Future Exchanges: Impacts to rangeland resources on the lands considered for disposal in the John Day Basin are expected to be negligible. These parcels are within Custodial allotments surrounded by private land, with their management being at the discretion of the lessee/permittee. Management of these lands is not anticipated to change from the current situation after disposal.

The 8 rangeland parcels totaling 616 acres near Canyon City and the City of John Day (G-284A, 284B, 279, 281, 282, 283, 296, and 298) could be used for residential housing or industry after transfer to private ownership. Existing rangeland vegetation on these parcels would be replaced by structures, parking lots, roads, and other facilities.

By acquiring private lands that are intermingled with public lands, contiguous blocks of public range/forestland can be formed. Grazing systems could then be designed and implemented to improve quality and quantity of forage plants on uplands and to enhance riparian habitats and watershed conditions.

Riparian/Wetland Resources

Phase I: Approximately 71.5 miles of riparian habitat could be acquired in Phase 1. About 12.5 miles of perennial streams with riparian habitat (within 33 parcels) would be disposed, for a net gain of 59 miles of riparian habitat (Tables 3-4 and 3-5) . This would result in a net gain of between 236 and 413 acres of riparian habitat. An additional 78.6 miles of non-perennial stream channels that largely do not have significant riparian characteristics would be disposed. Isolated areas of riparian vegetation species can be found on these channels however. About 78 miles of non-perennial streams would be acquired, resulting in almost an equal trade in amount of potential riparian corridors. Introducing consistent management over a large portion of a watershed would allow riparian plant communities to improve over time.

Perennial stream channels on disposal parcels are usually short segments, averaging about 0.38 mile in John Day Basin (Tables 3-4 and 3-5). The small size and isolated nature of the potential disposal parcels are not conducive to active management of grazing use. Riparian habitats on disposal rangelands are not expected to be impacted, because livestock grazing is not expected to change from the current situation.

Both the abundance and diversity of vegetation on acquired lands in the John Day Basin, as well as the North Fork subbasin, could be expected to increase after implementation of BLM's timber and grazing management practices. Erosion and stream sedimentation could be reduced, improving water quality and fish habitat.

Riparian communities on disposal lands are essentially unmanageable because they encompass small segments of streams. In contrast, riparian communities on the potential acquisition lands contain contiguous stream miles and associated riparian habitats along the North Fork John Day River and tributaries. Blocked Federal ownership would create new opportunities for enhancing stream and riparian habitats.

Future Exchanges: Approximately 7.6 miles of perennial streams could be acquired in blocked land areas. Approximately 2.2 miles of perennial streams on six parcels (G-110, 113, 118, 120, 124, and 126) would be disposed, creating a net gain of 5.4 miles (Tables 3-4 and 3-5). This exchange would create a net gain of between 22 and 38 acres of riparian habitat. About 30.4 miles of non-perennial stream channels could be acquired, and about 7.3 miles would be disposed, for a net gain of 23.1 miles. The beneficial effects resulting from gains in perennial and non-perennial stream miles coming into public ownership/management would be similar to descriptions in Phase 1.

Special Status Plant Species

Phase I: Under Alternative 1, two parcels containing arrowleaf thelypody would transfer to private ownership, as would populations of *Nevius' chaenactis*, a species of interest. It is likely, however, that a small number of certain populations (special status species, primarily) would be retained based on their apparent value to the species as a whole for such values as their genetic diversity and range fringe.

For all populations transferring into private ownership, it is likely that land uses would remain the same and that these populations would not be adversely impacted. Disposal of parcels containing special status and other species would not result in a significant loss of genetic diversity from Federal lands as all species are represented on adjacent Federal lands proposed for retention, including both BLM and Forest Service lands. Some loss in diversity would occur with the transfer of many lower-elevation parcels into private ownership, which would leave a gap in Federal ownership within this elevation zone. Biologically, however, most of these populations are expected to remain stable under private ownership.

Acquisition lands within the North Fork John Day River and tributaries would likely include new populations of special status plants, especially the arrowleaf thelypody.

Also under Alternative 1, acquisition lands would include at least one parcel in the South Fork John Day habitat area known to contain the South Fork John Day milkvetch (Bureau Sensitive and State Threatened). This acquisition is expected to be minimally beneficial, however, as the plant is found on surrounding BLM-administered lands so no apparent gain in genetic diversity would be gained.

Future Exchanges: Similar botanical resources and special status plant species would be expected to occur on lands identified for acquisition on Rudio Mountain and Buckaroo Flats in future phases.

Wildlife Habitat

Phase 1: In the John Day Basin, the BLM would acquire approximately 42,000 acres of contiguous habitat adjacent to the Umatilla National Forest. This land would provide habitat connectivity and landscape linkages for a wide array of wildlife species, as well as increased opportunities and flexibility for improved wildlife habitat management.

Acquisition lands in the North Fork John Day subbasin would encompass historic California Bighorn Sheep habitat and critical winter range providing habitat for 1,200 - 1,500 elk and 3,000 to 4,000 mule deer. Acquiring these lands would provide an opportunity for BLM to manage this large block of winter range in conjunction with adjacent winter range management areas on U.S. Forest Service lands.

Old-Growth Habitat

Phase 1: The BLM is proposing to dispose of approximately 939 acres of old-growth forest habitat on 31 parcels (Appendix B, Tables B-5 and B-6). The stands range from 6 to 100 acres in size. Approximately 600 acres of forestland with old-growth characteristics could be acquired within large blocks of forestlands. For analytical purposes, this number (600 acres) was determined by compiling acquisition acres with a 4= stocking level [which is a stand that has: (1) at least 10 trees/acre having a dbh greater than 21 inches, and (2) a 40 to 69 percent crown closure]. These are two of the major attributes associated with old-growth stands. Acquisitions of large blocks of habitat, especially forested and/or riparian parcels, would benefit wildlife species in the region.

Compared to the total old growth remaining on USFS National Forest lands in the John Day Basin (236,614 acres), the old-growth forested acres that would be disposed on BLM-administered lands are only a small percentage in the entire basin.

Future Exchanges:

Approximately 1,334 acres (11 parcels) of forestlands on disposal lands in future exchanges in the John Day Basin could potentially be classified as old growth. The stands range from 18 to 243 acres in size. Approximately 270 acres of old-growth forest habitat would be acquired in future exchanges.

Riparian/Wetland Habitat

Phase 1: There would be a net increase of 59 acres of riparian habitat on the acquired lands. The acquisition lands contain approximately 71.5 miles of riparian habitat with perennial water, and disposal lands contain approximately 12.5 miles. This exchange would be significant considering that 285 of the 378 terrestrial species (over 75%) known to occur in the Blue Mountains are either directly dependent on riparian zones, or use them more than other habitats (Thomas 1979). These riparian areas are one of the most critical wildlife habitats in the Blue Mountains, and the North Fork John Day River is an important wildlife corridor and link to other habitats. The net increase in the amount of riparian/wetland areas and associated contiguous miles of riparian habitat into public land ownership would provide increased opportunities to maintain or enhance habitats for wildlife.

Special Status Wildlife Species

Acquisition of wetland/riparian areas along the North Fork of the John Day River and its tributaries would provide important wintering habitat for the bald eagle *(Haliaeetus leucocephalus)*, a Federally listed Threatened species in Oregon, and the Columbia spotted frog (*Rana luteiventris)*, the only documented terrestrial candidate species in the NOALE area (Appendix B, Table B-2;USFWS 1997). Three bald eagle roosts that are currently on lands in private ownership would be included in the acquisition. An additional 12 bald eagle roosts sites exist on BLM-managed lands that are within large blocks of private lands considered for acquisition. Federal management of these surrounding private lands could prove beneficial to this species in the long term.

Fisheries

Phase 1: Acquisition of the private lands would bring nearly 60 miles of fish habitat (53.9 miles anadromous) within blocked landscapes into Federal management (Table 3-4). Approximately 8.25 miles of fish-bearing stream segments (5.15 miles anadromous fish habitat) on 26 parcels would be disposed to private ownership/management. This exchange would result in a net gain of 51.15 miles of fish habitat coming into BLM management.

The 8.25 miles of fish-bearing streams on 26 disposal parcels includes 4.9 miles within range parcels and 3.35 miles of fish-bearing streams on 16 forested parcels. Physical impacts to the riparian and stream resources on the disposal parcels would differ on rangeland and forestland parcels. Because of the small size and isolated nature of the parcels, BLM has not actively managed grazing. Livestock grazing, assumed to continue as before, would create no significant change from current conditions.

Approximately 170 acres of forestland proposed for disposal in the John Day Basin are within 1 mile of spawning and rearing bull trout habitat in Reynolds Creek. Another 280 acres of forestland are between 3 and 6 miles upstream of migrating bull trout habitat in the John Day River between John Day and Prairie City.

Impacts to fisheries resources on disposed lands are expected to be minimal within the scale of the John Day Basin. These impacts would not significantly contribute to the need to list the steelhead trout (Candidate species) or the bull trout (a species proposed for listing under the ESA). The BLM is not knowingly proposing disposal of stream segments that are crucial to any Proposed or Candidate Threatened or Endangered fish species survival. Most stream segments on disposal tract are short reaches, in poor to fair condition and not manageable. When considering acquisition of 60 miles of contiguous, manageable anadromous and resident salmonid fish habitat, conclusions are drawn that the proposed action would benefit fishery habitats (including bull and steelhead trout) in the John Day Basin. In the long term, it is expected that fish habitat in the John Day Basin acquisition areas would improve.

Future Exchanges: Approximately 4.8 miles of anadromous fish habitat could be acquired in Rudio and Holmes Creeks, and approximately 1.7 miles of anadromous fish habitat would be disposed within the Cottonwood Creek drainage (Table 3-4). Also, 7.3 miles of non-perennial stream channels and 0.5 miles of perennial streams (all non fish-bearing) would be transferred into private ownership (Table 3-8). The impacts of exchanging these habitats to private landowners would be similar to Phase 1 lands.

Recreational Resources

Phase 1: Public recreation opportunities would be lost on the lands considered for disposal. However, considering their limited legal access (only 20 percent), the loss of these recreational opportunities is expected to affect few public land users.

Acquiring lands within the North Fork John Day River drainage would provide an outstanding opportunity for dispersed recreation. About 42,000 acres of contiguous lands would be acquired on the JV Ranch and the North Fork John Day River and its tributaries. Blocked and contiguous public lands would improve the opportunity for camping, fishing, hunting, horseback riding, hiking, mountain biking, and wildlife viewing. With the acquisition of 12 miles of river frontage on the North Fork John Day, boaters and other recreational users of the river who now have difficulty locating public land for camping would have access to 13 additional dispersed river sites that provide camping opportunities. Among the 13 sites identified for potential acquisition is Ellingson Mill site on the John Day Wild and Scenic River, discussed in more detail in the Wild and Scenic River section.

Access: Under Alternative 1, 18 acquisition parcels, ranging in size from 200 to 21,700 acres) would be entirely accessible to the public. The disposal parcels range between 10 and 2,310 acres, and approximately 80 percent have no legal public access.

The proposed exchange would provide legal public access to an additional 4,300 acres in the South Fork John Day River drainage, including 4 miles of the South Fork John Day Wild and Scenic River.

Future Exchanges: Acquisition of 16,900 acres in the Rudio Mountain area would create a 37,600-acre block of public lands on the west side of the mountain and provide access to these lands for public recreational use. In addition to recreational opportunities on newly acquired public lands, legal public access would be available to isolated public land parcels that have been popular with hunters for generations. Specifically, resolving the current access problems in the Rudio Mountain area would likely stimulate an increase in camping, hiking, horseback riding, mountain biking, wildlife viewing, and horn hunting.

Motorized and non-motorized access would be available to these lands via Dick Creek, Frank's Creek and Rudio Creek roads, and Holmes Creek Road. Construction of several short road segments on public lands may be necessary to complete the access system to acquired lands.

Wild and Scenic Rivers

Phase 1 and Future Exchanges: Acquisition of lands within the South Fork John Day River drainage would increase recreational access to the South Fork John Day Wild and Scenic River and improve BLM's ability to protect and manage the river's outstandingly remarkable values.

On the South Fork John Day River, disposal of approximately 130 acres of uplands within the proposed Wild and Scenic River boundary would be offset by acquisition of about 1,270 acres of lands within the proposed boundary. There would be a net gain of 1,140 acres of land within the corridor and 4 miles of river frontage with public access.

Blocking public lands in this area would improve high quality motorized and non-motorized recreational opportunities for camping, fishing, hunting, picnicking, swimming, hiking, horseback riding, mountain biking, and wildlife viewing. Recreational users of the South Fork John Day River would have access to many additional dispersed recreational sites that provide camping opportunities, including the Ellingson Mill site, which is identified as a key site for acquisition in the 1993 Draft John Day River Management Plan. This parcel, which is isolated from the sights and sounds of the road, would provide an excellent opportunity for camping along the river.

Floodplains

Phase 1: Approximately 10 acres of floodplain lands, designated as such by the Federal Emergency Management Agency, would be disposed on the South Fork John Day River. Acquired lands would include approximately 70 acres of designated floodplains along the South Fork John Day River and approximately 218 acres of floodplain area along the North Fork John Day River. This exchange would result in a net increase of 278 acres of floodplains into Federal ownership.

The BLM's management would be intended to promote natural floodplain function. Management activities would be designed to improve riparian and streamside vegetation. Soil protection would be improved and soil compaction lessened. Woody debris may increase. Any project work or facilities would be designed and located in such a way as to minimize damage from flooding and to prevent interference with floodplain function. These management guidelines should help the floodplain perform its natural function and tend to reduce impacts from flooding downstream. Management of floodplains on disposal parcels are not expected to change from the current situation.

Soils

Phase 1 and Future Exchanges: Some impacts to upland soils in timberlands are anticipated. Forest management activities that disturb the soil (such as road building, yarding, burning, or scarification) can alter the pathways water takes to stream channels, thereby increasing or decreasing the volume of peak stream flows. Soils can be compacted by logging activities. If the infiltration capacity of soils is sufficiently reduced, water runs off or over, rather than through the soil, which increases the potential for soil erosion (Chamberlin et al. 1991).

A portion (24 acres) of Parcel M30 would likely be used for agricultural production after the exchange. Future condition of the soils on this parcel would be contingent on the management and expertise of its owner. Removal of the current vegetation and periodic disturbance of the soil would increase its potential for soil erosion.

Eight parcels (G279, 281-284A, 284B, 296, and 298) near Canyon City may be developed for residential housing. Impacts from surface disturbance and decreased water infiltration capacities would be minor and immeasurable. Any construction activities would be regulated by building codes, which should adequately protect soil resources.

Cultural Resources

Phase 1 and Future Exchanges

Traditional Use Areas: Consolidation of public lands along the North Fork of the John Day River and its tributaries, the South Fork John Day River, and Rudio Mountain would enhance tribal access to usual and accustomed areas, improving opportunities for fishing, hunting, and traditional uses in the basin. Although specific root-gathering fields have not been identified on potential acquisition lands, the diverse habitats present are an indicator of the occurrence of culturally important plant and animal species. Habitats on potential acquisition lands include perennial streams with anadromous and resident fish habitat; riparian and upland lithosol plant communities; ponderosa pine and mixed conifer forests; and important summer and winter wildlife habitat. Over the long term, habitat improvement on acquired lands could increase the potential for harvest of fish and wildlife species of importance to tribal communities.

Paleontological Resources

Phase 1 and Future Exchanges: Evaluation and protective measures of any localities of vertebrate, and possibly botanical, fossils discovered as a result of the inventory of proposed exchange parcels should provide protection for their resource values.

Timber Resources

Phase I: BLM would dispose of 7,230 acres of commercial forestlands (CFLs) containing approximately 59.7 million board feet (MMBF) of commercial timber. The potential acquisition lands have approximately 10,634 acres of commercial forestlands (44.8 MMBF of commercial timber). This exchange would increase BLM's base of CFL lands by 3,404 acres.

These timber volumes were derived using completed cruise information, where available, and professional judgement on lands not yet cruised. Actual timber values are not available until appraisals are completed.

Since lands proposed for acquisition by BLM have site classes 3 and 4, the amount of commercial timber volume produced per acre would be increased over the long term.

Future Exchanges: Approximately 8,740 acres of CFLs would be acquired and approximately 3,941 acres of CFLS would be disposed in the John Day Basin. This exchange would result in an additional increase in BLM's commercial forestlands by 4,799 acres. Timber volume data for these parcels is not yet available.

Livestock Grazing

Phase I: An estimated five new grazing allotments would be formed from acquisition lands, with most new lands being added to existing allotments. Grazing leases on 108 grazing allotments would be totally or partially canceled and 6,139 AUMs of forage transferred to private ownership.

Based on professional judgement, the acquired lands likely have forage capacities to support 8-15 acres per AUM. An assessment of the acquired lands conducted after the exchange would determine appropriate levels of grazing in consideration of other resources. Based on about 47,400 acres being acquired and depending on forage conditions, an estimated 3,160 to 5,925 AUMs of forage could be permitted.

By intensively managing livestock and changing grazing seasons, forage production could increase depending upon climatic and soil conditions. Woody and herbaceous species could also increase in riparian areas.

Future Exchanges: Grazing leases on 8 grazing allotments would be totally or partially cancelled, and 180 AUMs of forage would be transferred into private ownership.

Alternative 2 *(No Action Alternative)*

Special Status Plant Species

The opportunity to acquire land in the North Fork John Day River corridor and Rudio Mountain habitat areas would be forgone, as would the possibility of potentially acquiring additional populations of arrowleaf thelypody. Acquisition of additional South Fork John Day milkvetch populations would also be forgone under the No Action Alternative.

Two parcels containing arrowleaf thelypody would remain in Federal ownership, as would numerous known and unknown populations *Nevius' chaenactis*, a species of interest. Based on existing inventory, the two parcels containing arrowleaf thelypody would receive management by BLM, primarily in the form of periodic monitoring. Due to the scattered nature of the public lands, all other populations would not likely receive either management or monitoring.

Wildlife Habitat

Acquisition of over 75 miles of riparian habitat, including Bald eagle wintering habitat and potential Columbia spotted frog habitat, would be foregone.

Fisheries

The opportunity to acquire over 60 miles of fish habitat on the North Fork and South Fork John Day Rivers in large contiguous land blocks would be forgone. Continued and increased timber harvesting and associated road construction/ reconstruction along these stream corridors would continue to produce sedimentation impacts to fishery habitats.

Wild and Scenic Rivers

The opportunity to acquire 4 miles of the South Fork John Day Wild and Scenic River would be forgone. There would be no impact to publicly owned segments of Wild and Scenic Rivers. Approximately 130 acres, including 0.2 stream miles, within the proposed Wild and Scenic River Corridor on the South Fork John Day River would be retained in Federal ownership.

Floodplains

The opportunity to acquire over 280 acres of floodplain lands on the North and South Forks of the John Day River would be forgone. Ten acres of FEMA-designated floodplain lands on the South Fork John Day would not be disposed and would remain under Federal management.

Soils

There would be no additional impacts to soils or prime and unique farmlands.
Under this alternative, no impacts to soils would occur on the public lands. Parcel M30 and its portion of Prime Farmland would be retained in public ownership, and the current vegetation regime would remain, protecting the site from soil erosion.

Paleontological Resources

No significant effect would occur to fossil resources if the exchange does not occur.

Alternative 3 *(Retention Alternative)*

Approximately 31,000 acres of public land (240 acres) would be disposed in Alternative 3 (Maps 5-7 and Table 4-1). This would be 23,400 acres (179 parcels) less than Alternative 1. The proposed retention parcels contain large trees (Table A-3 in Appendix A).

Forestlands

Alternative 3 would dispose approximately 1,000 acres of forestlands that are generally isolated and scattered throughout Grant, Umatilla, and Morrow counties. The BLM would acquire approximately 1,160 acres of forestlands within the JV Ranch, which is adjacent to the Umatilla National Forest and scattered BLM parcels not considered for disposal. Average forest stand sizes on the acquired lands are not significantly different from those on disposal parcels. Forested stands on the JV Ranch are primarily stringers of timber along drainage bottoms and north facing slopes. The opportunity to gain additional forestlands in blocked patterns would be forgone.

The opportunity to implement more efficient ecosystem management practices on forestlands along the North Fork John Day River corridor would be forgone.

Large Tree Component: Under Alternative 3, approximately 370 acres of forestlands containing a large tree component would be acquired. No BLM forestlands with large tree components would be disposed.

Riparian/Wetland Areas

Approximately 18.5 miles of riparian habitat could be acquired on fish-bearing and non fish-bearing streams. About 5 miles of riparian habitat would be disposed, for a net gain of 13.5 miles of riparian habitat. This exchange would result in a net gain of between 54 and 95 acres of riparian habitat. About 36 miles of non-perennial streams would be acquired, and approximately 21 miles of non-perennial stream channels would be disposed for a net gain of 15 miles. Isolated areas of riparian vegetative species can be found on these non-perennial channels. Implementing intensive grazing management on the acquired JV Ranch would allow riparian plant communities to improve over time.

Effects to riparian habitat from timber harvesting on disposal lands would be similar to those described in Alternative 1, but on a smaller scale. Nearly every forested parcel with perennial streams would be retained under Alternative 3.

Special Status Plant Species

Two parcels containing arrowleaf thelypody would transfer to private ownership, as would populations of *Nevius' chaenactis*, a species of interest. It is likely, however, that a small number of certain populations (special status species, primarily) would be retained based on their apparent value to the species as a whole for such values as genetic diversity and range fringe.

For all populations transferring into private ownership, it is likely that land uses would remain the same and that there would be no adverse impact to these populations. Disposal of parcels containing special status and other species would not result in a significant loss of genetic diversity from Federal lands since all species are represented on adjacent Federal lands proposed for retention, including both BLM and Forest Service lands. However, some loss in diversity would occur with transfer of many lower-elevation parcels into private ownership, which would leave a gap in Federal ownership within this elevation zone. Biologically, however, it is expected that most of these populations would remain stable under private ownership.

The opportunity to acquire land in the North Fork John Day and Rudio Mountain habitat areas would be forgone, as would the possibility of acquiring additional populations of arrowleaf thelypody and other species likely to occur in these areas.

Wildlife

Among areas not acquired would be most of the North Fork of the John Day River corridor and many tributaries that provide wintering habitat for two special status species: the Bald eagle and the Columbia spotted frog (Appendix B, Table B-1; USFWS 1997).

Fisheries

Approximately 17.7 miles of anadromous fish habitat would be acquired within the JV Ranch. About 3.6 miles of fish habitat on 8 parcels (G28, 70, 110, 133B, 136B, 167, 261, and UM54) would be disposed. Impacts to fish habitat would be minimal, since only one disposal parcel (UM54) contains timber adjacent to a fish bearing stream (0.05 miles) that potentially could be harvested.

The other seven parcels flow through rangelands. The opportunity to acquire an additional 33 miles of fish habitat in large contiguous land blocks would be forgone.

Recreation

Recreational opportunities on about 44,300 of the 64,300 acres of private lands considered for acquisition (all phases) in the John Day Basin would remain limited to the private landowners. Recreational opportunities currently available to the public via ODFW easement on the North Fork John Day River would not be affected.

Public access would be available on a 20,000-acre land block (currently known as the JV Ranch), which includes the Wall, LIttle Wall, Ditch, and Cabin Creek drainages. Future management plans of the acquired lands would address dispersed recreation and road access. Public access on lands considered for disposal would be similar to Alternative 1.

Wild and Scenic Rivers

Since no lands within Wild and Scenic River corridors would be disposed, there would be no effect to this resource from the current situation. Also, no lands within Wild and Scenic River corridors would be acquired under this alternative. The opportunity to acquire 3 miles of the South Fork John Day Wild and Scenic River with public access would be forgone.

Floodplains

In the short term, there would be no impact to floodplains. However, future land exchanges would likely result in cumulative impacts similar to Alternative 1, but on a smaller scale over a longer period of time. The opportunity to acquire over 280 acres of floodplain lands on the North and South Forks of the John Day River would be forgone. Ten acres of FEMA-designated floodplain lands on the South Fork John Day would not be disposed and would remain under Federal management.

Soils

No adverse impacts to soil resources or prime and unique farmlands is anticipated from acquiring the private lands. Effects to soils resources on disposal lands would be similar to Alternative 1.

Cultural Resources

Phase 1 exchanges are not expected to affect cultural resources. However, future land exchanges would likely result in cumulative impacts similar to Alternative 1, but on a smaller scale over a longer period of time.

Traditional Use Areas: The impacts to traditional use areas and treaty rights would be similar to Alternative 1. However, the opportunity would be forgone to acquire and consolidate lands that would contribute substantially to tribe access and use of traditional areas on the North Fork John Day River.

Paleontological Resources

Phase 1 exchanges are not expected to impact paleontological resources. However, future land exchanges would likely result in cumulative impacts similar to Alternative 1, but on a smaller scale over a longer period of time.

Timber Resources

Approximately 1,000 acres of commercial forestlands (about 6 MMBF) would be disposed and approximately 1,160 acres of commercial forestlands would be acquired (about 2.5 MMBF). Actual timber values are not available until appraisals are completed. The opportunity to block ownership and to acquire better site class lands would be forgone.

Livestock Grazing

One existing grazing allotment would be retained from acquisition of lands in the JV Ranch. This allotment would be composed almost entirely of public lands. Grazing leases on 21 grazing allotments would be canceled entirely, and another 23 allotments would have portions of their leased public lands disposed. About 2,100 AUMs of forage would be transferred into private ownership.

Based on professional judgement, the acquired lands would likely have forage capacities to support between 8-15 acres per AUM. An assessment of the acquired lands conducted after the exchange would determine appropriate levels of grazing in consideration of other resources. With about 20,000 acres being acquired, it is estimated that approximately 1,333-2,500 AUMs could be permitted, based on forage conditions.

By intensively managing livestock and changing grazing seasons, forage production could increase depending upon climatic and soil conditions. Woody and herbaceous species could also increase in riparian areas.

Environmental Consequences in Umatilla Basin

Parcel-specific Impacts associated with disposal of 69 parcels of public lands managed by the BLM and potential acquisition areas, where known, in the Umatilla Basin are discussed below by resource value and alternative. Reference beginning of Chapter 3 for Common Impacts to Resources For All Basins and Socioeconomics Impacts Common To All Basins.

Alternative 1 (*Preferred Action)*

This alternative would dispose of 7,157 acres of public land (69 parcels) and acquire an undetermined acreage of equitable value, including 840 acres identified to date (Map 4; Table 4-1; and Tables A-1a and A-1b in Appendix A).

Forestlands

Phase I Exchanges: In Phase 1, the BLM would dispose of 416 acres of forestlands that are generally isolated and scattered in two counties: Umatilla and Morrow. The disposal lands are located on 13 parcels (Parcels M8-13, 15; UM9-11, 13, 48 and 62)) (Appendix A, Tables A-1a and 1b).

BLM forested parcels would be retained in the South Fork Walla Walla River drainage and in the vicinity of the Umatilla Indian Reservation. The remaining parcels are either adjacent to other public lands or in blocks that are manageable. Disposing of the most isolated parcels from public ownership would simplify application and implementation of forest health treatments.

Future Exchanges: This phase would dispose of 291 acres of forestlands on 8 parcels (UM12 and UM40-46) into private ownership. Approximately 450 acres of forestlands along the North Fork Walla Walla River are in future transactions for acquisition. The total cumulative reduction in BLM-managed forestlands in this basin from Phase 1 and future transactions would be 257 acres.

Large Tree Component: About 188 acres of forestlands with a large tree component on 7 parcels would be disposed in Phase 1 (M8, 9,11-13, 15; and UM62). Of this acreage, 151 acres are in Morrow County and 37 acres are in Umatilla County.

In future exchanges, approximately 236 acres of forestlands with large trees would be disposed on 7 parcels (UM40-46). The total cumulative large tree component disposed in Phase 1 and future transactions would be 424 acres on 14 parcels.

Rangelands

Phase I Exchanges: In Phase 1, there would be approximately 3,000 acres of rangeland parcels transferred to private ownership.

Nineteen of these parcels would likely be converted to other use under private ownership (Appendix A-Table A-6), including 14 (M26 and 28; UM18,, 20-23, 29, 30, 32, 36-38, and 64) for agricultural and 5 (UM24-28, totaling 165 acres) for rural residential or industrial use. Approximately 175 acres in 3 of the 14 parcels (M26, M28, and UM32) suitable for agricultural use are currently farmed under land use permits; this use would likely continue under private ownership, so the exchange would not impact these areas. The remaining 11 parcels suitable for agriculture would likely be converted to agriculture use, which would replace the existing rangeland vegetation.

On the five parcels expected to be converted to housing/industrial use, the existing rangeland vegetation would be replaced by structures, parking lots, roads, and other facilities.

Future Exchanges: Under future exchanges, five additional rangeland parcels would be disposed that could be converted to other use: M27; UM63, 67, 68, and 75. Approximately 200 acres in portions of three parcels (M27, UM68 and 75)) are suitable for agricultural use; most of this use would be on UM75 on Juniper Canyon. Two parcels (UM63 and 67 totaling 21 acres) are suitable for housing or industrial use.

Existing vegetation would not change substantially on disposal rangeland parcels that are suitable only for livestock grazing, as the current uses are expected to continue in a manner and degree of use similar to present situations.

There is potential for acquiring approximately 390 acres along the North Fork Walla Walla River in the future.

Riparian/Wetland/Resources

Phase I Exchanges: In Phase 1 of Alternative 1, approximately 1.14 miles of perennial streams on 3 parcels (M8, 12 and UM10) and 2.81 miles of non-perennial streams on 11 parcels (UM11, 14, 19, 20, 39, 62, 74,78, 79; M12 and 13) would be disposed. These stream miles would transfer 4 to 8 acres of riparian habitat into private ownership. The intermittent pond on UM26 would also be disposed.

Disposing of these parcels is not expected to impact any sensitive, threatened, or endangered species that inhabit any of the above streams.

Future Exchanges: About 8 miles of perennial stream on 8 parcels (UM35, 40, 43-46, 69 & 75) and 3.16 miles of non-perennial streams on 5 parcels (UM12,40, 43, 44, and 75) would be disposed in future transactions. The exchange would dispose of 32-56 acres of riparian area. A 15-acre wetland would also be disposed (UM35)

Portions of UM75 (Juniper Canyon) have previously been farmed, but are reclaimed to grassland vegetation. Returning these areas to agricultural use may increase erosion and the mineral/organic nutrients of the stream in Juniper Canyon. The nutrient increase may reduce the stream's dissolved oxygen supply, resulting in alteration of the stream's vegetative composition and habitat quality.

Approximately 3 miles of riparian habitat on the North Fork Walla Walla River, 3.8 miles of non-perennial streams, and 12-21 acres of riparian area could potentially be acquired.

Columbia Basin Shrub Steppe

Phase 1: Approximately 2,089 acres of Columbia Basin Shrub Steppe vegetation on 25 parcels would be disposed (M24, 28; UM17-34, 36-38; 64, and 76). Impacts would be minimal on the approximate 139 acres on 2 parcels (M28 and UM32) that are currently being farmed under land use permits. Following transfer into private ownership, approximately 749 additional acres of Columbia Basin shrub steppe vegetation would be replaced with agricultural crops, other vegetation, or urban facilities. Vegetation on the remaining 1,200 acres of shrub steppe would not be affected, and current use and management of them would continue.

Future Exchanges: In the future, an additional 3,104 acres would be disposed on 8 parcels: M27, 29, 32; UM 35, 66-68, and 75. Most of this habitat is on UM75 in Juniper Canyon. Approximately 200 acres on 3 parcels (M27, UM68 and 75) would be farmed, and Parcel UM67 totaling 15 acres would be converted to industrial or housing use. Vegetation on the remaining disposed acres would not be affected.

At the conclusion of both phases, the acreage transferred into private ownership would represent less than 1 percent of the total current acreage of Columbia Basin Shrub Steppe vegetation. The acreage that would be converted to agriculture or industrial uses represents a small percentage (about 0.01%) of the total current acreage.

Special Status Plant Species

Phase 1 and Future Exchanges: Three plant species that BLM and the Oregon Natural Heritage Program track to evaluate their distributions and status are located on BLM parcels being considered for disposal. The plant species are transparent milkvetch (*Astragalus diaphanus* var. *diaphanus)*, stalked-pod milkvetch (*Astragalus sclerocarpus)*, and crouching or Columbia milkvetch (*Astragalus succumbens*). Of these three, only the populations of *A. sclerocarpus* and *A. succumbens* on parcels UM20 and UM21 are of sufficient size to represent manageable, viable populations. Under private ownership, both parcels would likely be converted to agricultural use, resulting in destruction of those populations. Consultation with Oregon Natural Heritage Program personnel indicates that loss of these populations would not contribute to the need to list those species as threatened or endangered, nor preclude the ONHP program from maintaining a full range of biological communities in Oregon.

No known federal/state-listed or BLM sensitive plant species are expected to be impacted with exchange of any of the BLM parcels in the Umatilla Basin because none are known to exist on the potential disposal lands in that basin. Impacts to any species located as inventories are completed and/or specific exchange proposals proceed should be protected adequately under subsequent environmental assessments tiered to this EIS.

Fisheries

Phase 1: Approximately 0.60 miles of perennial streams on 3 parcels (UM10; M8 and 12) would be disposed.

Future Exchanges: This phase would dispose of 4.16 miles of perennial streams on 6 parcels (UM35, 40,45, 46, 69 & 75). Approximately 2 miles of intermittent streams in UM75 produce surface runoff into Juniper Canyon Creek. Agricultural conversion within UM75 could cause a minimal increase in farm chemicals and sediment in perennial streams in parcels UM35 and UM75. However, the fish species in these two parcels would not likely be affected. The dilution factor when this stream enters the Columbia would make the additional pollutants undetectable. Approximately 1.15 miles of intermittent streams in UM40, 43, and 44 provide high quality water into UM40.

Disposal of the parcels in Phase 1 and future exchanges would not affect populations of special status fish species (bull trout, steelhead trout, or margined sculpin) within the South Fork Walla Walla River drainage.

Recreation

Phase I and Future Exchanges: Dispersed recreational activities on 21 parcels with public access would be lost. Those parcels are: M11; UM23-30, UM34,35, 45, 46, 62, 76 and 77. Because these parcels are small (ranging in size from 20 to 160 acres, with 10 parcels being 40 acres or less), their recreational opportunities are limited and few users would be affected.

The greatest loss of recreational opportunity would result from disposal of 13 parcels near Hermiston (UM23-30; M27; UM63, and 66-68). Of these, 8 parcels (UM23-30) would be transferred in Phase I, and the other 5 would be transferred in future exchanges. These parcels are located in close proximity to Hermiston (all within about 15 miles). In the Hermiston area, there are other Federal lands, including one remaining BLM parcel (the Power City Wildlife Area totaling about 100 acres), that have public access. Recreation use now occurring on the 13 parcels identified for disposal would be displaced to other Federal lands or to other public lands.

Disposal of the 48 parcels that have no public access would have little or no impact on recreational opportunities of the general public. On these parcels, recreational use is limited due to restricted accessibility. When considering disposal of these parcels in exchange for lands that are accessible, there would be increased recreational opportunities for the public. For example, under a future exchange, approximately 840 acres of forest and rangelands could be acquired on the North Fork Walla Walla River in a parcel that would be accessible to the public by hiking trail from the Umatilla National Forest

Soils

Phase 1 and Future Exchanges: Impacts to soil resources (from timber management, agriculture activities, and urban and industrial development) on disposal lands would be similar to those in the John Day Basin. The sandy soils on many parcels in the Umatilla Basin make them susceptible to wind erosion. Appropriate farming methods and irrigation practices (where used) would minimize these impacts; it is expected that private landowners would employ soil protection measures to avoid erosion.

On the five parcels expected to be used for housing/industrial use (UM 24-28), the soils would be disturbed and dislocated. Soils would likely be excavated, stockpiled for a time, and eventually relocated. Once construction is completed, most exposed soils would be protected by plantings; future disturbance is expected to be minimal.

Future Exchanges: Some soil impacts are expected on the portions of three parcels likely to be converted to agricultural use (M27, UM68 and 75 for a total of approximately 200 acres) and the two parcels likely to be used for housing or industry (UM63 and 67, totaling 21 acres) . Impacts to soil resources (from timber management, agriculture activities, and urban and industrial development) on these additional disposal lands would be similar to the John Day Basin's soil impacts.

Prime/Unique Farmlands

Phase 1 and Future: Under Phase 1, 290 acres in 5 parcels that have soils classified as prime farmland would be disposed (UM18, 20, 21, 24, and 27). Parcels UM18, 20, and 21 would be converted to agricultural production, and UM24 and 27 (totaling 55 acres) would be used for housing or industrial use. Future exchanges would likely dispose of parcel UM67 (15 acres), which would be developed for housing or industrial use.

Cultural Resources

Traditional Use Areas: A potential future acquisition on the North Fork of the Walla Walla River would enhance access to usual and accustomed fishing stations and traditional use areas.

Timber Resources

Phase 1 and Future Exchanges: Approximately 707 acres of commercial forestlands would be disposed (416 acres in Phase 1, and 291 acres in future exchanges). In future NOALE transactions, approximately 450 forested acres could be acquired on the North Fork Walla Walla River. The net result would be loss of 257 acres in the Baker Resource Area's commercial forest base. Timber volumes on disposal and acquisition lands are still being determined.

Livestock Grazing

Phase 1 Exchanges: Grazing leases on 30 parcels currently leased by Baker Resource Area would be canceled and 213 AUMs of forage would be transferred into private ownership. The 30 parcels are: M8, 11, 12, 14, 15, 24 26: UM9-11, 13-17, 20-23, 28-33, 36, 37, 47, 62, and 76. These parcels would typically be transferred to the adjoining landowner or lessee. Since grazing is expected to continue with the same management and intensity as before, there would be no impact to grazing use of these parcels. Other Phase 1 parcels may be grazed, but currently have no lease. Grazing use on these parcels would also continue as before.

Grazing use, if any, on disposal parcels converted to agricultural, residential, or industrial use would be reduced or eliminated.

Future Exchanges: Three additional parcels (UM12, 35, and 75) with grazing leases would be transferred in future exchanges, amounting to 229 AUMs, mostly in UM75 which is the largest parcel.

Approximately 105 AUMs of livestock forage may be acquired in a potential future acquisition.

Air Quality

Phase 1 Exchanges: Conversion of portions of 11 disposal parcels totaling 584 acres (UM18, 20-23, 29, 30, 36-38 and 64) to agricultural use would result in a slight, immeasurable impact on air quality in the northern part of the basin. The impact would be limited to times of windy conditions and to certain times in the farming cycle. This impact is correlated to the susceptibility of sandy soils to wind erosion, which adds dust to the air.

Conversion of five disposal parcels (UM24-28 totaling 165 acres) to industrial, rural residential, or other use would also add dust content in the air, but also in small immeasurable quantities. Impacts would likely be temporary, during construction, when soils are being exposed and disturbed.

Future Exchanges: Conversion of portion of an additional three parcels (M27, UM68 and UM75 totaling approximately 200 acres) to agriculture and two additional parcels (UM63 and 67 totaling 21 acres) to other uses would have an immeasurable, negligible impact on air quality in the area.

Hazardous Materials

Two parcels (UM26 and 67) are located adjacent to the closed landfill on BLM-administered land near Hermiston, which was dropped from the exchange proposal. Suitability and disposal of these two parcels would be contingent on results of hazardous material surveys.

Alternative 2 *(No Action)*

Forestlands

The opportunity to acquire 450 acres of forestlands along the North Fork Walla Walla River would be forgone.

Columbia Basin Shrub Steppe

No initial impact to Columbia Basin Shrub Steppe is expected, since current uses would continue. Because these parcels are small and/or lack access, it is unlikely BLM would implement any management on these parcels. Future land exchanges at a smaller scale could result in some Columbia Basin Shrub Steppe being converted to agriculture or urban use.

Fisheries

The opportunity to acquire 2.5 miles of anadromous fish habitat on the North Fork Walla Walla River would be forgone.

Recreation

The opportunity to acquire approximately 840 acres of forest and rangelands with dispersed recreation potential on the North Fork Walla Walla River may be forgone. This parcel is accessible by hiking trail from the Umatilla National Forest.

Soils

Agricultural use on portions of three parcels (M26, 28, and UM32) would continue under existing leases, disturbing soils periodically as a result of tilling and other farming activities. Future land exchanges at a smaller scale could result in some rangeland tracts being converted to agriculture or urban use with impacts similar to those described under Alternative 1.

Air Quality

Three parcels currently in agriculture use under Land Use Permits would continue in that use. Air quality would continue to be periodically and immeasurably affected by this use.

Hazardous Materials

The two parcels located adjacent to the closed landfill near Hermiston (UM26 and 67) would be retained by the BLM.

Alternative 3 (*Retention Alternative*)

Under Alternative 3, there would be 1,032 acres disposed in 22 parcels and an undetermined acreage of equitable value acquired (Map 8 and Table 4-1). This acreage is 6, 127 acres (47 parcels) less than Alternative 1. The 840 acres identified for potential acquisition in Alternative 1 would not be acquired in this alternative. The proposed retention parcels have either large tree component or Columbia shrub-steppe (Table A-3 in Appendix A).

Forestlands

Phase 1: The BLM would dispose of 166 acres of forested public lands on 6 parcels (M10; UM9-11, 13, & 48). In the future, an additional 15 acres on one parcel would be disposed (UM12).

Future Exchanges: At the conclusion of future exchanges, the total reduction of BLM forested acreage would be 181 acres. There would be 14 isolated BLM forested parcels remaining in the Umatilla Basin (M8, 9, 11-13, 15; UM40-46, & 62), which would be inefficient and cost prohibitive to manage for improvement of forest health.

Rangelands

The 800 acres of rangelands disposed in Phase 1 are expected to be used for rangeland purposes after disposal. Rangeland vegetation would be impacted on only 6 acres (Parcel UM63). This parcel is located next to Hermiston's cemetery and presumably would be incorporated into the cemetery.

Riparian/Wetland Areas

Phase 1: Approximately 0.6 miles of perennial streams (UM10) and 1.2 miles of intermittent streams in 3 parcels (UM11, 14, and 39) would be disposed.

Columbia Basin Shrub Steppe

Parcels with this vegetation would remain in public ownership. It is unlikely BLM would implement any management activities to improve conditions on small, isolated parcels. An exception may be the larger parcels in the Juniper Canyon area and parcels near Hermiston where cooperative management agreements may be established with adjoining landowners or other entities. Retaining these parcels in public ownership would prevent these small patches of Columbia Basin shrub steppe vegetation communities from being converted to agricultural or other uses.

Special Status Plant Species

In this alternative, Parcels UM20 and UM21 (which have special status species on them) would be retained in public ownership. There would be no effect on the manageable populations of *Astragalus sclerocarpus* and *Astragalus succumbens* found on these parcels, nor any other special status plant species.

Fisheries

Approximately 0.32 miles of perennial streams would be disposed in Phase 1 and another 0.01 miles in future exchanges. Alternative 3 may eliminate the opportunity to acquire perennial fish-bearing stream habitat in the North Fork Walla Walla River drainage.

Recreation

The effect on recreational opportunities under this alternative would be minimal. There may be a forfeited opportunity to acquire approximately 840 acres of accessible forest and rangelands on the North Fork Walla Walla River. The access is by hiking trail from the Umatilla National Forest.

Access: Under this alternative, all parcels with public access, except for two (UM63 and 77), would be retained in public ownership. Parcel UM77 (70-acre) would be disposed in Phase I, and UM63 (6 acres) would be disposed in future transactions. Dispersed recreation opportunities for the general public on these two parcels would be lost.

Soils

Rangeland vegetation would be lost on only one 6-acre parcel (UM63), which would be used for industrial, rural residential, or other use after the exchange. Periodic disturbance to the soils would occur after disposal of this parcel to private ownership, but the soils would also be largely protected from erosion by vegetative cover.

Prime/Unique Farmlands: All parcels with soils classified as prime farmland would be retained in public ownership in this alternative. There would be no effect to this resource.

Cultural Resources

Traditional Use Areas: Traditional use areas for hunting and gathering in Juniper Canyon would be retained in public ownership.

The opportunity to acquire known usual and accustomed fishing stations and traditional use areas on the North Fork Walla Walla River may be forgone.

Timber Resources

Approximately 166 acres (Parcels M10; UM9-11,13 & 48) of commercial forestlands would be disposed in Phase 1, and an additional 15 acres (UM12) in future exchanges. These disposals would reduce the Baker Resource Area's commercial forest base by 181 acres. Timber volume on disposal parcels would be determined before the final EIS is published.

Livestock Grazing

In Phase 1, grazing leases on 9 disposed parcels would be canceled and 53 AUMs of forage would be transferred into private ownership (Parcels M14,UM9-11, 13-16, & 47). There would be no change in the management of parcels retained in this alternative, and those parcels with grazing leases would continue to be grazed. Parcel UM12, which has a grazing lease for 2 AUMs, would be disposed in a future exchange.

Air Quality

One small parcel (UM63, totaling 6 acres) might be converted to other use after disposal. The loss of residual vegetation would add minor amounts of dust to the air on a temporary basis.

Hazardous Materials

The two parcels (UM26 and 67) adjacent to the closed landfill on BLM-managed land near Hermiston would be retained in BLM administration.

Environmental Consequences in Grande Ronde Basin

To date, no specific lands have been identified for acquisition in the Grande Ronde Basin. Lands located along the Wallowa and Grande Ronde Rivers and their major tributaries may be considered for acquisition in NOALE future transactions. The future transactions would be contingent on several factors, including availability of private lands for acquisition and the resource values of the lands. The private lands are generally described in the Baker Resource Management Plan (July 1989) and in the Wallowa and Grande Ronde River Final Management Plan/ Environmental Assessment (December 1993).

Resource inventories will be completed at a later date and identified and addressed in environmental assessments tiered to this EIS. The focus of impacts in this basin is on disposal lands since acquisition lands have not yet been identified. Also, the discussions are limited to those resources for which there is parcel-specific information. Reference beginning of Chapter 3 for Resource Impacts Common to All Basins and Socioeconomic Impacts for All Basins.

Alternative 1 (Preferred Alternative)

Approximately 3,440 acres of public land (43 parcels) would be disposed under this alternative (Map 4: Table 4-1; and Tables A-1a and A-1b in Appendix A).

Forestlands

Approximately 2,260 acres of forestlands would be disposed in 33 parcels. The parcels are: UN1-3, 5, 7, 9, 10, 14, 16-28, 37-39, 41, 42, 61-64, 68, 69, and 71. These potential disposal lands represent less than 0.5 percent of the total forested land in this basin for all ownerships. The proposed disposal under this alternative would reduce the BLM forested lands in the Upper Grande Ronde Basin from 2,856 to 635 acres. Among the forested parcels retained in BLM management are forested public lands along the Grande Ronde River, surrounded by Forest Service lands, or containing segments of the Oregon Trail.

Large Tree Component: Of the total forestlands disposed, approximately 538 acres on 14 parcels (UN3, 5, 7, 26-28, 39, 41, 42, 62-64, 68, and 71) have a large tree component. Among the forested public lands with large tree component being retained in BLM management are 182 acres within the Upper Grande Ronde Basin.

Rangelands

Among the lands being disposed in this basin are approximately 1,180 acres of public rangeland. Of 43 parcels proposed for disposal in this basin, 32 have at least a small amount of rangelands. As in the other basins, any rangelands to be disposed would typically be transferred to the adjoining landowner or lessee. Assuming that grazing continues with the same management and intensity as in public ownership, the resource values of the rangelands would not be impacted beyond the present management situation.

Riparian/Wetland Areas

Approximately 6.25 miles of perennial stream segments, both fish bearing and non-fish bearing, and between 25 and 42 acres of associated riparian habitat would be disposed into private ownership (Tables 3-12 and 3-13). Because these segments are short, ranging from 0.25 to 0.60 miles, their disposal is expected to have minimal impact.

Fisheries

Approximately 3.15 miles of fish-bearing streams (2.3 miles anadromous) on 9 parcels would be disposed (Tables 3-12 and 3-13). The affected disposal parcels are UN2, 14, 16, 25, 26, 39, 44, 63, and 64. Because these stream segments are small (from 0.25 to 0.60 miles), any impacts would be minimal.

Recreation

Dispersed recreational activities on 23 parcels with legal public access would be lost. The parcels are UN1-4, 7, 12, 14, 17, 18, 21, 24-27, 37, 38, 42, 61-64, 68, and 71. On the 11 parcels that are small (40 acres), the recreational opportunities are limited and the users affected would be few. These 11 parcels are UN4, 12, 24, 37, 38, 42, 61, 63, 64, 68, and 71.

Disposal of the 20 parcels that have no access would have minimal impact to the recreational opportunity and uses for the general public, as the lands are only legally accessible to adjacent landowners and those who secure permission to cross intervening private land.

Timber Resources

Disposal of approximately 2,260 acres of commercial forests would reduce the Baker Resource Area's commercial forest base. There would be 33 parcels affected: UN1-3, 5, 7, 9, 10, 14, 16-28, 37-39, 41, 42, 61-64, 68, 69, and 71 (Appendix A, Tables A-1a and A-1b). The timber volume, to be determined later, would be removed from the public resource base.

Livestock Grazing

Grazing leases on the 32 parcels currently leased would be canceled and 254 AUMs of forage would be transferred into private ownership. The 32 parcels are UN3, 7, 9-12, 16-29, 34-39, 41, 42, and 61-64. Since these parcels would likely be transferred to the adjoining landowner or lessee, there would be no anticipated effect on any lessee.

Alternative 2 (*No Action*)

Reference Common Impacts for All Basins (Alternative 2). No parcel-specific impacts have been identified for this basin.

Alternative 3 *(Retention Alternative)*

Approximately 2,200 acres of public land (29 parcels) would be disposed in Alternative 3 (Map 8). This would be 1,240 acres (14 parcels) less than Alternative 1. The proposed retention parcels contain large trees (Table A-3 in Appendix A).

Forestlands

Approximately 1,426 acres of forestlands (19 parcels) would be disposed (Parcels 1, 2, 9, 10, 14, 16-25, 37, 38, 61, and 69). BLM would retain approximately 1,430 acres of commercial forest in the Upper Grande Ronde Basin. The remaining commercial forestlands would be scattered throughout the Upper Grande Ronde Basin on 24 parcels. Forest health issues on these parcels would remain difficult to address.

This alternative would reduce the acreage BLM might exchange, limiting the opportunity to block large forest stands into management in the Grande Ronde and Powder River Basins.

Riparian/Wetland Areas

Under Alternative 3, six parcels with riparian/wetland areas would be disposed (Parcels UN1, 2, 14, 16, 25, and 44). Compared to Alternative 1, these parcels would have 1.55 stream miles and 5-9 acres of riparian areas less that would be transferred into private ownership.

Fisheries

Under this alternative,1.9 fish-bearing stream miles would be disposed; this is 1.25 fewer miles than Alternative 1.

Recreation

Alternative 3 would retain approximately 1,040 acres on 10 parcels of public land with legal access (Parcels UN3, 7, 26, 27, 42, 62-64, 68, and 71), eight of which do not have road access. This alternative would reduce the acreage that BLM might exchange, limiting the opportunity to block lands and provide additional public recreation in the Grande Ronde and Powder River Basins.

Timber Resources

The disposal of approximately 1,426 acres of commercial forestland under Alternative 3 would reduce the Baker Resource Area's commercial forest base. Timber volumes, to be determined later, would be removed from the public resource base.

Livestock Grazing

Grazing leases on 21 of the parcels currently leased would be canceled and 149 AUMs of forage would be transferred into private ownership. The affected parcels would be UN9-12, 16-25, 29, 34-38, and 61. Grazing would likely continue with the same management and intensity on all disposed tracts. Grazing leases on parcels retained in public ownership would remain in effect, with no change in management.

Environmental Consequences in Powder River Basin

Parcel-specific impacts are described below for BLM-administered lands considered for disposal in the Powder River Basin. Any parcels of public land that may be acquired in the Powder River Basin are in future exchanges, and therefore have not been identified and cannot be assessed for impacts; the exception is that some impacts are generally identified for areas of acquisition interest. In some cases, there may also be general knowledge about private lands (such as occurrence of plants) that are discussed. Site-specific environmental assessments tiered to this EIS will be prepared to address the impacts for acquisition lands after parcel identification

Reference beginning of Chapter 3 for Resource Impacts Common To All Basins and Socioeconomics Impacts for All Basins. Parcel-specific impacts for this basin and alternative are described below.

Alternative 1 (*Preferred Alternative)*

Approximately 27,217 acres of public land (246 parcels) would be disposed under this alternative (Map 4;Table 4-1; and Tables A-1a and A-1b in Appendix A).

Forestlands

Under Alternative 1 (Preferred Action), the lands proposed for disposal include approximately 1,971 acres of forestlands (66 parcels). This acreage represents less than 0.3 percent of the total forestland in this basin for all ownerships. The proposed forestland disposal would reduce the BLM forest holdings from approximately 17,000 to 15,039 acres in the Powder River Basin. It is anticipated that BLM may acquire forestlands in the Lookout Mountain and Dooley Mountain areas, which would likely result in a net gain of forested property transferring to public ownership in this basin.

Large Tree Component: Approximately 471 acres of forestlands with a large tree component on 23 parcels would be disposed (B-1, 71, 128-130, 135, 138, 144, 158, 160, 162, 177-179, 184, 193, 197-199, 213, 226, 227, and 240). BLM would retain 5,965 acres with a large tree component within the Powder River Basin. Since the acquisition areas of interest contain forested lands, it is anticipated that some areas with a large tree component would be acquired.

Rangelands

The BLM may acquire some acreage of rangeland vegetation. However, because acquisition areas of interest emphasize forestlands, some decline in BLM ownership of rangeland vegetation acreage may result.

Management and use on most disposed parcels would not likely change. No change in rangeland vegetation cover or condition is likely to occur, except on those portions of 10 parcels likely to be converted to agriculture (B5, 29, 45-47, 87, 202, 203, 206, and 218).

Riparian/Wetland Areas

Under Alternative 1, an estimated 8 miles of perennial streams (with 32-56 acres of associated riparian areas) and 16.5 miles of intermittent streams would be disposed in the Powder River Basin.

Special Status Plant Species

Potential acquisition lands within the Snake River breaks/Lookout Mountain may have some habitat for Snake River goldenweed (*Haplopappus radiatus)*, a state-listed endangered species. It is possible that BLM would acquire some habitat for this species. Until specific lands are identified for acquisition, however, it is not possible to quantify potential habitat gains for this or any other special status species.

There is potential for *Haplopappus radiatus* and possibly other special status plant species to occur on disposal parcels. Some populations of these species could be transferred to private ownership under Alternative 1. Parcels considered for disposal have not been inventoried, therefore, neither the potential effects on the future status of any special status species nor the potential loss of habitat can be evaluated at this time. Land use on most disposed parcels is not expected to change, so there would be no adverse impact on populations.

Inventories done before the exchange would identify any special status species, and subsequent environmental assessments tiered to this EIS would provide protective measures.

Fisheries

This alternative would dispose of approximately 7.92 miles of streams, including 6.87 miles of fish-bearing streams and 1.05 miles of non-fish bearing streams.

Recreation

Dispersed recreational activities on 61 disposal parcels with public access would be lost. Because most of these parcels are small, recreation opportunities are limited. Other parcels, without legal access, are available to use only by adjacent landowners and those able to secure permission to cross intervening private land.

Recreational use is not available to the public on most of the parcels considered for disposal because of the lack of legal access. Acquired lands are expected to be in areas with legal access or areas that will provide new legal access, as well as block ownership to improve recreation opportunities. As a result, a net increase is expected in the acreage of public lands with legal access.

Visual Resources

There would be a net gain in higher quality visual resources if the BLM acquires certain lands in the Lookout Mountain target area and the Powder River below Thief Valley Dam, which are rated VRM Class I or II. BLM-administered lands proposed for disposal are VRM Class III.

Wild and Scenic Rivers

Potential future acquisitions along the Powder River below Thief Valley Reservoir could add up to 1.5 miles of Federally administered public land to the Wild and Scenic River system. BLM management of this acquisition would enhance the values for which this river was added to the system.

Disposal of the identified parcels would have no effect on Wild and Scenic Rivers.

Wilderness Areas

Certain lands within future acquisition areas of interest in the northern portion of the Snake River Breaks area are within the Homestead and Sheep Mountain Wilderness Study Areas. Any lands in these areas would enhance wilderness values and facilitate BLM management of the WSAs. No disposal parcels are within designated Wilderness or Wilderness Study Areas .

Areas of Critical Environmental Concern

Lands may be acquired adjacent to or within the Sheep Mountain, Homestead, or Powder River Canyon ACECs. Any addition to these units would represent an increase of public land acreage within ACECs. Future management would be intended to enhance those values for which the ACEC designation was applied. No disposal parcels are within designated ACECs.

Soils

Existing management and land use on most rangeland parcels disposed would be unlikely to change, causing no additional effects to soils. Portions of 10 parcels (B5, 29, 45-47, 87, 202, 203, 206, and 218) could be converted to agricultural use if irrigated, with impacts similar to those described for the John Day and Umatilla Basins. Acquired rangeland tracts would consolidate Federal land ownership and facilitate more effective intensive livestock management, resulting in improvements in erosion control efforts and soil stability.

Prime or Unique Farmland

It is unlikely that BLM would acquire any prime or unique farmland in this exchange.
Portions of 10 disposal parcels with soils classified as prime farmland could be converted to agricultural use if irrigated. The 10 parcels are the same as those listed directly above under the soils discussion.

Cultural Resources

Traditional Use Areas: Consolidation of public lands in the five acquisition areas of interest, including the Snake River Breaks and Dooley Mountain vicinity, would enhance tribal access to traditional use areas.

Paleontological Resources

Evaluations on the seven known paleontological localities on parcels proposed for disposal should provide protection for these values.

Timber Resources

Disposal of approximately 1,970 acres of commercial forestlands (ranging in size from 2 to 160 acres) would reduce the Baker Resource Area's commercial forest base. Timber volumes, to be determined later, would be removed from the public resource base. Any commercial forested lands acquired would be added to the commercial forest land base.

Livestock Grazing

Under Alternative 1, there would be 41 grazing allotments canceled and 2,448 AUMs of forage transferred to private ownership.

Alternative 2 (No Action)

Reference beginning of Chapter 3 (Alternative 2 - Impacts Common to All Basins).

Alternative 3 (Retention Alternative)

Approximately 22,858 acres (223 parcels) would be disposed in Alternative 3 (Map 8). This acreage would be 4,359 acres (23 parcels) less than Alternative 1. The proposed retention parcels contain large trees (Table A-3 in Appendix A).

Forestlands

Approximately 1,359 acres or forestlands (43 parcels) would be disposed. This is 612 acres less than Alternative 1. Most of the 612 retained acres are on small, isolated parcels without legal access. BLM would retain approximately 15,640 acres of commercial forestland in the Powder River Basin. Forest health issues would still be difficult to address on scattered parcels.

Rangelands

Nearly all rangeland vegetation on parcels identified for disposal would be transferred to private ownership, and the effect would be similar to Alternative 1. Opportunities for improved range management would be greater than currently exists, but less than under Alternative 1.

Riparian/Wetland Areas

Data on the potential disposal parcels has not been compiled yet.

Special Status Plant Species

Populations of *Haplopappus radiatus* (Snake River goldenweed), a state endangered and BLM Sensitive species, and other special status species could be transferred to private ownership under this alternative. Potential effects on any species found to exist on disposal parcels would be evaluated in subsequent environmental assessments tiered to this EIS. In most cases, land use on parcels transferred would remain the same and there would be no adverse impact on populations.

Under this alternative, BLM could acquire habitat for *Haplopappus radiatus*, although the chances may be somewhat less than under Alternative 1.

Fisheries

Data is not yet compiled on the potential disposal parcels.

Recreation

Dispersed recreation would be lost on 51 parcels that have legal access, including 29 parcels that have road access. Alternative 3 would dispose of 172 parcels that have no legal access. Compared to Alternative 1, there would be 10 additional parcels that have legal access retained in public ownership. The BLM would acquire less acreage with legal access and recreational opportunities.

Wild and Scenic Rivers

Due to reduced acreage potentially acquired under Alternative 3, there would be reduced opportunity for acquiring portions of the Scenic segment of the Powder River below Thief Valley Reservoir.

Wilderness Areas

The would be less opportunity for acquiring lands within the Homestead or Sheep Mountain Wilderness Study Areas under this alternative.

Areas of Critical Environmental Concern

Due to reduced acreage potentially acquired under Alternative 3, there would also be less opportunity for acquiring lands adjacent to or within the Sheep Mountain, Homestead, or Powder River Canyon ACECs.

Soils

Impacts to rangeland and forestland soils would be essentially the same as for Alternative 1. Use of best management practices in BLM timber harvest plans on retained and newly acquired forestlands would minimize soil impacts.

Prime or Unique Farmland

The impacts of disposing of the 10 parcels classified as prime farmland (Parcels B5, 29, 45-47, 87, 202, 203, 206, and 218) would be the same as Alternative 1.

Timber Resources

Disposal of approximately 1,359 acres of commercial forestlands under Alternative 3 would reduce the commercial forest base in the Baker Resource Area. Timber volumes, to be determined later, would be removed from the public resource base. Any acquired commercial forestlands would be included in the commercial forest base.

Livestock Grazing

Under Alternative 3, there would be 36 grazing allotments canceled, and 2,380 AUMs of forage transferred to private ownership.

Glossary

ACEC (Area of Critical Environmental Concern) - Type of special land use designation specified within the Federal Land Policy and Management Act (FLPMA).

Allotment - An area designated for the use of a prescribed number and kind of livestock under one plan of management; may include one or more separate pastures.

Anadromous fish - Fish that hatch in freshwater, migrate to the ocean to mature, and return to freshwater to reproduce. Salmon and steelhead are examples.

AUM (Animal Unit Month) - Amount of forage required to sustain one cow and calf, or their equivalent, for one month (one AUM equals six bighorn sheep months).

Basin - In general, the area of land that drains water, sediment, and dissolved materials to a common point along a stream channel.

Best Management Practices - Methods, measures, or practices designed to prevent or reduce water pollution.

Board foot (bf) - A unit of wood measuring 12 inches by 12 inches by 1 inch.

Bureau Assessment Species - Species on List 2 of the Oregon Natural Heritage Database, or those species on the Oregon List of Sensitive Wildlife Species (OAR 635-100-040) that are identified in BLM Instruction Memo OR-91-57, and are not included as a Federal candidate, state listed, or Bureau sensitive species.

Bureau Sensitive Species - Species eligible as Federally listed or candidate, state listed or state candidate (plant) status; or on List 1 in the Oregon Natural Heritage Database; or otherwise approved for this category by the State Director.

Candidate Species - Plant/animal species that may be proposed for listing as endangered or threatened in the future, in the opinion of the U.S. Fish & Wildlife Service (USFWS) ro the National Marine Fisheries Service (NMFS). The USFWS recently revised its list of candidate species (Feb. 28, 1996 *Federal Register*); under their new system, only those species for which they have enough information to support a listing proposal will be called candidates.

Any species included in the Federal Register Notice of Review that are being considered for listing as threatened or endangered by the U.S. Fish and Wildlife Service.

Code of Federal Regulations (CFR) - Government publication listing all Federal regulations in existence.

Columbia Basin Shrub-Steppe - Vegetative community consisting of one or more layers of perennial grass with a conspicuous but continuous overstory layer of shrubs.

Commercial Forestlands - Forestland capable of producing merchantable timber at rates of at least 20 cubic feet per acre per year and is currently or prospectively accessible and not withdrawn from such use.

Confidence Level - An estimate of the precision around a sample mean that indicates the likelihood that the interval includes the true value (i.e., there is no false error).

Council on Environmental Quality (CEQ) - Government agency with oversight of the implementation of the National Environmental Policy Act (NEPA).

Cover - Trees, shrubs, rocks, or other landscape features that allow an animal to partly or fully conceal itself; area of ground covered by plants of one or more species.

Cubic feet per second (cfs) - Means of measuring the flow rate of a liquid, usually water.

Cultural Resources - Fragile and nonrenewable elements of the environment including archaeological remains (evidence of prehistoric or historic human activities) and sociocultural values traditionally held by ethnic groups (including sacred places, traditionally utilized raw materials, etc.).

Cumulative Impact - Impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Such impacts can result from individually minor, but collectively significant actions occurring over a period of time.

Diameter at breast height (dbh) - The diameter of a tree 4.5 feet above the ground on the uphill side of the tree.

Dispersed recreation - Recreation that does not occur in a developed recreation site; for example, hunting or backpacking.

Diversity - A measure of the variety of species and habitats in an area that takes into account the relative abundance of each species or habitat.

Easement - A right in the owner of one parcel of land, by reason of such ownership, to use the land of another for a special purpose not inconsistent with a general property in the owner.

Ecosystem - An ecological unit consisting of both living and nonliving components that interact to produce a natural, stable system.

Endangered Species - A plant or animal species listed under the Endangered Species Act that is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) - One type of document prepared by Federal agencies in compliance with the National Environmental Policy Act (NEPA) that portrays the environmental consequences of proposed Federal actions not expected to have significant impacts on the human environment

Environmental Impact Statement (EIS) - One type of document prepared by Federal agencies in compliance with the National Environmental Policy Act (NEPA) that portrays the environmental consequences of proposed major Federal actions expected to have significant impacts on the human environment.

Environmentally Preferred Alternative or Plan - The alternative plan that results in the least damage or most protection, preservation, or enhancement to biological, physical, historic, cultural, and other natural resources. This alternative is clearly identified in the Record of Decision.

Ephemeral Stream - A stream that flows only after rain or during snow melt.

Evolutionary Significant Unit (ESU) - A term applied for purposes of consideration under the Endangered Species Act to refer to a distinct population segment that is substantially reproductively isolated from other conspecfic population units and represents an important component in the evolutionary legacy of the species.

Federal Energy and Regulatory Commission (FERC) - Government agency with responsibility for issuing permits and licenses for power projects.

Federal Land Policy and Management Act of 1976 (FLPMA) - Law mandating that the Bureau of Land Management manage lands under its jurisdiction for multiple uses.

Federal Register (FR) - Daily government publication reporting all activities in the Federal government.

Floodplain - A relatively flat area or lowlands adjoining a body of standing or flowing water that has been or might be covered by floodwater.

Forb - A broad-leafed herb that is not a grass, sedge, or rush.

Forestland - Land that is now, or is capable of becoming, at least 10 percent stocked with forest trees and that has not been developed for nontimber use.

Formation - A sequence of rock strata that is recognizable over a large area.

Habitat - A place that provides seasonal or year-round food, water, shelter, and other environmental conditions for an organism, community, or population of plants or animals.

Herd Management Area (HMA) - Public land under the jurisdiction of the Bureau of Land Management that has been designated for special management emphasizing the maintenance of an established wild horse herd.

Intermittent Stream - A stream that flows only at certain times of the year when it receives water from other streams or from surface sources such as melting snow.

Issue - A subject or question of widespread public discussion or interest regarding management of public lands and identified through public participation.

Large tree - Tree that measures at least 21 inches diameter at breast height (4.5 feet above ground on uphill side of tree).

Late-Seral - Ecological condition class corresponding to 51 to 75 percent of the plant composition found in the potential natural plant community.

Leasable minerals - Minerals that may be leased to private interests by the Federal government; includes oil, gas, geothermal, coal, and sodium compounds.

Lithic - A stone or rock that may be either abraded into the proper form for use as a tool or shaped by knocking pieces (flakes) off. A cluster of flakes is called a "lithic scatter."

Locatable minerals - Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended; includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

Mainstem - The main channel of the river in a river basin, as opposed to the streams and smaller rivers that feed into it.

Management Framework Plan (MFP) - Previous name for land use plans developed by the Bureau of Land Management; replaced by the Resource Management Plan (RMP).

Monitoring and Evaluation - Collection and analysis of data to evaluate the progress and effectiveness of on-the-ground actions in meeting resource management goals and objectives.

National Environmental Policy Act of 1969 (NEPA) - Law requiring all Federal agencies to evaluate the impacts of proposed major Federal actions with respect to their significance on the human environment.

National Wildlife Refuge (NWR) - An area administered by the U.S. Fish and Wildlife Service for the purpose of managing certain fish or wildlife species.

Non-perennial stream - Intermittent stream; one that does not have flowing water on a year round basis under normal climatic conditions.

Noxious Weed - A plant specified as being especially undesirable, troublesome, and difficult to control.

Off-Road Vehicle - Any motorized track or wheeled vehicle designed for cross-country travel over any type of natural terrain.

Old-Growth - Older forests that differ significantly from younger forests in structure, ecological function, and species composition. Minimum standards: 10 or more large trees over 21 inches dbh per acre and 40-69 percent canopy closure of dominant trees.

Perennial Stream - A stream that ordinarily has running water on a year-round basis.

ppb - parts per billion; scientific unit of measure.

ppm - parts per million; scientific unit of measure.

Preferred Alternative - The alternative plan in the Draft EIS that the agency has initially selected as the best to fulfill the agency's statutory mission and responsibilities and offers the most acceptable resolution of the planning issues and management concerns.

Prehistoric - Period wherein Native American cultural activities took place which were not yet influenced by contact with historic nonnative cultures.

Prescribed Fire - Introduction of fire to an area under regulated conditions for specific management purposes (usually vegetation manipulation).

Prime or unique farmland (PUF) - *Prime farmland* is land best suited for production of food, feed, forage, fiber, and oilseed crops; its soil properties, growing season, and moisture supply can generally support soils capable of producing sustained high yields economically.

Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops, such as tree nuts, fruits, and vegetables. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods.

Properly Functioning Condition (PFC) - Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality, filter sediment, capture bedload, and aid floodplain development; improve flood-water retention and ground-water recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian-wetland areas is a result of interaction among geology, soil, water, and vegetation.

Riparain-wetland areas that are not rated as being in PFC are classified as being either Functional-at-risk or Non-functional:

Functional-At-Risk - Riparian-wetland areas that are in functional condition but have an existing soil, water, or vegetation attribute that makes them susceptible to degradation.

Non-functional - Riparian-wetland areas that clearly are not providing adequate vegetation, landform, or large woody debris to dissipate stream energy associated with high flows and thus are not reducing erosion, improving water quality, etc. The absence of certain physical attributes such as floodplain where one should be are indicators of non-functioning conditions.

Rangeland - Land on which the native vegetation is predominantly grasses, grass-like plants, forbs, or shrubs; not forest.

Recreational opportunity - Those outdoor recreation activities that offer satisfaction in a particular physical, social, and management setting; these activities are primarily camping, fishing, hunting, wildlife viewing, photography, bike riding, and boating.

Redd - A depression excavated by anadromous fish in which to lay their eggs.

Relative Abundance - A measure of species abundance or dominance within a given area or community type that is often presented in terms of percentages. Example: species A comprises approximately 25 percent of the total number of individuals present in the project area.

Resource Management Plan (RMP) - Land use plans developed by the Bureau of Land Management under the Federal Land Policy and Management Act; previously called Management Framework Plans.

Right-of-Way - A permit or easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, and reservoirs.

Riparian Area - Area with distinctive soil and vegetation between a stream or other body of water and the adjacent upland; includes wetlands and those portions of floodplains and valley bottoms that support riparian vegetation.

Salable Minerals - High volume, low value mineral resources including common varieties of rock, clay, decorative stone, sand, gravel, and cinder.

Shrub - A low, woody plant, usually with several stems, that may provide food and/or cover for animals.

Special Status Species - Plant or animal species in one of the following categories: Federally listed threatened or endangered species, species proposed for Federal listing as threatened or endangered, candidate species for Federal listing, State listed species, Bureau sensitive species, or Bureau assessment species (see separate definition for each).

Species Diversity - The number, variety, and relative abundances of species occurring in a given area.

Species of Special Interest or Concern - Plant or animal species not yet listed as endangered or threatened, but whose status is being reviewed because of their widely dispersed populations or their restricted ranges; a species whose population is particularly sensitive to external disturbance.

State Listed Species - Any plant or animal species listed by the State of Oregon as threatened or endangered within the state under ORS 496.004, ORS 498.026, or ORS 564.040.

Threatened Species - Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Listings are published in the Federal Register.

Traditional cultural properties - Historic properties that have significance deriving from "the role that the property plays in a community's historically rooted beliefs, customs, and practices." Such properties may be eligible for the National Register because of their "association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (National Register Bulletin 38).

Traditional cultural properties may include landforms or landscape features, such as pinnacles, buttes or springs or mountains; or may have both artifact and architectural manifestations. These properties may be associated with an event or person, or a past or ongoing traditional practice important to a living community. They may be places with both historic secular and sacred associations. Some properties may be well known and mapped or documented in existing archival histories or ethnographic literature, but many can only be identified by knowledgeable individuals within the community (Sebastian 1993).

Upper Columbia River Basin Ecosystem Management Project (UCRBEMP) - A project examining the effects (on a large, regional scale) of past and present land use activities on the Upper Columbia River Basin ecosystem and a small part of the Great Basin ecosystem.

Visitor Use Day - Twelve hours of recreational use by one person.

Visual Resource - Visible physical features of a landscape.

Visual Resource Management Classes - The three categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. Each class has an objective prescribing the acceptable visual change within a characteristic landscape.

VRM Class I:	Preserve existing character of landscape.
VRM Class II:	Retain existing character of landscape.
VRM Class III:	Partially retain existing character of landscape.

Watershed - The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream or lake.

Wetlands - Areas that are inundated by surface water or ground water with a frequency sufficient to support, and under normal circumstances do or would support, a prevalence of vegetative or aquatic life that require saturated or seasonally saturated soil conditions for growth and reproduction (Executive Order 11990). Wetlands generally include, but are not limited to, swamps, marshes, bogs, and similar areas.

Wilderness - Area where the earth and its community of life have not been seriously disturbed by humans and where humans are only temporary visitors. In this document, the term is capitalized and refers to specific lands designated by Congress as Wilderness Areas and protected and managed to preserve their natural condition.

Wilderness Study Area (WSA) - Public land that is determined to have wilderness character and is currently in an interim management status awaiting official wilderness designation or release from WSA status by Congress.

Woodlands - Forestland not included in the commercial forestland sustainable harvest level. Includes all noncommercial and nonsuitable forestland.

Table A-1a. Public Lands Considered for Disposal in Northeast Oregon Assembled Land Exchange.

On this table, the parcels are listed by county (Wheeler-W, Grant-G, Morrow-M, Umatilla-UM, Union-UN, and Baker-B) and legal description in ascending order, to the extent possible. The order is from lower numbered townships/ranges/sections to larger numbered, with any northern townships listed first, followed by southern townships. A summary listing total potential disposal acres identified to date by county is presented at the end of the table.

In cases where two or more parcels have the same township and range, the parcels are grouped. Because the parcels are listed by legal description, the parcel numbers are not in numerical sequence. Also, some sequential inconsistency in the list of legal descriptions occurs when a parcel encompasses multiple sections. For reference purposes, Table A-1b lists the potential disposal parcels in sequential order by parcel number. Identical information is provided on both tables.

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
Wheeler County		
	T. 6 S., R. 23 E.	
W1	Sec. 23, NE¼ SW¼	40
	T. 7. S, R. 22 E.	
W2 and W3	Sec. 12, Lot 3, NW¼NE¼	34
W4	Sec. 14, NW¼SE¼	40
W5	Sec. 20, SW¼NE¼	40
W6	Sec. 23, NW¼SW¼	40
W7 and W8	Sec. 25, NE¼NE¼, S½NW¼	120
W8 and W9	Sec. 26, S½NE¼, SE¼SE¼	120
W10	Sec. 34, NE¼SW¼	40
	T. 8 S., R. 21 E.	
W24A	Sec. 5, Lot 1	28

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
W24B	Sec. 14, Lot 5	38
	T. 8 S., R. 22 E.	
W11 and W15	Sec. 1, Lots 1,3 and 5 (37.97, 38.91, and 34.60 acres, respectively)	111
W16	Sec. 4, SE¼NW¼	40
W17	Sec. 6, SE¼SW¼	40
W17	Sec. 7, Lot 6, NE¼NW¼	81
W12	Sec. 10, Lot 4	37
W13	Sec. 11 SE¼SW¼	40
W19	Sec. 24, Lots 3 and 4 (30.43 and 30.89 acres, respectively), and W½W½	381
W19	Sec. 25, Lots 1-4 (31.36, 31.83, 32.3, and 32.77 acres, respectively) and W½NE¼, NW¼SE¼	248
W21 and W22	Sec. 26, Lots 1 and 2 (35.19 and 35.09 acres, respectively) and NW¼SE¼, S½SE¼	190
W700	Sec. 34, NE¼SE¼	40
W21	Sec. 35, N½NE¼	80
	T. 8 S., R. 23 E.	
W14	Sec. 9, S½SW¼	80
W18	Sec. 19, E½SW¼, SW¼SE¼	120
W32	Sec. 23, NW¼NE¼	40
W20	Sec. 30, Lots 2 and 3 (38.82 and 38.94 acres, respectively), SE¼SW¼	118
	T. 8 S., R. 24 E.	
W33	Sec. 5, SE¼SW¼	40
W33	Sec. 8, NE¼NW¼, S½NW	120
W34	Sec. 10, NW¼SW¼	40
W35	Sec. 17, SW¼SW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres
W36	Sec. 21, NW¼SE¼, SE¼SE¼	80
W37	Sec. 23, E½SW¼, W½SE¼, NE¼SE¼	200
W38	Sec. 25, SW¼NE¼	40
W36 and W39A	Sec. 27, NW¼NW¼, SW¼SE¼	80
W36	Sec. 28, NE¼NE¼	40
	T. 8 S., R. 25 E.	
W41	Sec. 3, SW¼NE¼, NE¼SW¼, N½SE¼	160
W39B	Sec. 7, NE¼SW¼	40
Grant County		
	T. 7 S., R. 27 E.	
G7	Sec. 34, SW¼SE¼	40
	T. 7 S., R. 29 E.	
G5	Sec. 14, S1/2NW¼	80
G5	Sec. 15, SE¼NE¼	40
G6	Sec. 17, NW¼SE¼	40
	T. 7 S., R. 30 E.	
G4	Sec. 15 NW¼NE¼	40
G2 and G3	Sec. 23, SE¼SW¼, NE¼SE¼	80
G1	Sec. 24, NE¼NE¼	40
	T. 8 S., R. 27 E.	
G8	Sec. 14, N½NW¼	80
G8 and G9	Sec. 15, N½NE¼W½SW¼	160
G10	Sec. 25, NW¼SE¼	40
G701	Sec. 29, N½SW¼	80

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
G76ABC	Sec. 32, W½SW¼	80
G72	Sec. 35, SE¼SW¼	40
	T. 8 S., R. 28 E.	
G11	Sec. 1, Lots 1 and 2 (39.48 and 39.82 acres, respectively), and S½NE¼, N½SE¼	239
G24	Sec. 11, S½NE¼,E½SW¼, SE¼	20
G24	Sec. 12, S½N¼, S½NW¼, N½SW¼, SW¼SW¼	280
G20 and G21	Sec. 14, NW¼NE¼, NE¼NW¼, NW¼SW¼, NW¼SE¼	160
G17	Sec. 15, E½SW¼	80
G16 and G18	Sec. 22, NE¼NE¼, SW¼NW¼,NE¼SE¼	120
G702 and G19	Sec. 23, N½NW¼, SE¼NW¼, SW¼SW¼	160
G23	Sec. 24, W½NE¼, NW¼SE¼	120
G15	Sec. 26, SW¼SE¼	40
G14	Sec. 27, SW¼SE¼	40
G13	Sec. 28, N½SW¼	80
G11	Sec. 31, Lots 9 and 10 (25.06 and 24.85 acres, respectively)	50
	T. 8 S., R. 29 E.	
G27B	Sec. 5, SW¼NW¼	40
G25	Sec. 7, Lots 7,8,9,16,17,18,19,21 and 22 (48.65, 40, 40, 40, 40, 48.62, 48.58, 40, and 40 acres, respectively).	386
G703	Sec. 9, SW¼NW¼	40
G26	Sec. 18, Lot 15	40
G28	Sec. 22, SW¼SE¼	40
G28	Sec. 27, NE¼, E½NW¼, NW¼SE¼	280

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres
G29	Sec. 35, NE¼SW¼, NW¼SE¼	80
	T. 8 S., R. 30 E.	
G32	Sec. 12, SE¼NW¼	40
G33	Sec. 14, NE¼NE¼	40
G30	Sec. 20, SW¼NW¼	40
G34	Sec. 24, S½SW¼	80
	T. 8 S., R. 31 E.	
G704	Sec 23, NE¼NW¼	40
G35	Sec. 30, Lot 1	28
G705 and G37	Sec. 32, NE¼NW¼, NW¼SW¼	80
	T. 9 S., R. 26 E.	
G76ABC	Sec. 1, Lots 1 and 2 (29.52 and 29.57 acres, respectively), S½NE¼, NE¼SE¼	179
G84A	Sec. 3, Lots 3 and 4 (26.57 and 26.2 acres, respectively), and SW¼NE¼, S½NW¼)	173
G84D	Sec. 4, S½SW¼	80
G84B	Sec. 10, E½, E½SW¼	400
G84B	Sec. 11, SW¼NE¼, SW¼	200
G84E, G81, and G82	Sec. 14, N½NW¼, NW¼SW¼, NE¼SE¼	160
G84B	Sec. 15, NE¼NE¼	40
G706	Sec. 19, NE¼SE¼	40
G83A and G80	Sec. 22, S½NE¼, N½SE¼, SW¼SW¼, SW¼SE¼	240
G80	Sec. 23, NW¼NE¼, S½N½, N½S½, S½SE¼	440
G80	Sec. 24, SE¼NW¼, NE¼SW¼, S½SW¼, SW¼SE¼	200

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
G80	Sec. 25, NW¼NE¼, NW¼, N½SW¼, SE¼	440
G80	Sec. 26, NE¼	160
G83B	Sec. 27, SE¼SE¼	40
	T. 9 S., R. 27 E.	
G71	Sec. 3, Lots 2 and 3 (35.05 and 35.35 acres, respectively)	70
G73	Sec. 4, Lot 1	36
G74 and G75	Sec. 5, Lot 1 (33.34 acres), and SE¼NE¼, W½SW¼	153
G76ABC	Sec. 6, Lots 4,5 and 6 (29.83, 40.37,and 40.62 acres, respectively), and SW¼NE¼, SE¼NW¼, NE¼SW¼, NW¼SE¼	271
G69	Sec. 11, W½SE¼	80
G69	Sec. 14, NW¼NE¼	40
G77A	Sec. 18, S½NE¼, N½SE¼, SE¼SE¼	200
G77ABC	Sec. 19, NE¼NE¼, S½NE¼, N½SE¼, SW¼SE¼	240
G68B and G67	Sec. 23, E½SW¼, E½SE¼	160
G68C	Sec. 24, NW¼NE¼, S½NE¼, NW¼NW¼, S½NW¼, S½	600
G68C	Sec. 25, N½NE¼, SW¼NE¼, NE¼NW¼, S½SE¼	240
G66 and G68B	Sec. 26, NE¼NE¼, SE¼SW¼, NW¼SE¼	120
G79	Sec. 29, S½NE¼, N½SE¼, SW¼SE¼	200
G77ABC and G78	Sec. 30, NW¼NE¼, SE¼NE¼	80
G79	Sec. 32, N½NE¼, NE¼ NW¼	120
G65ABC	Sec. 34, E½E½	160
G65ABC	Sec. 35, W½NW¼, SW¼, SW¼ SE¼	280
G64ABC	Sec. 36, NE¼, NE¼SW¼, E½SE¼	280

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
	T. 9 S., R. 28 E.	
G55B	Sec. 3, Lot 4	36
G55A	Sec. 4, NW¼SE¼	40
G56	Sec. 5, Lot 8	40
G57	Sec. 6, Lots 1,2,3,6 and 7 (32.26, 31.14, 30.02, 40, and 40 acres, respectively), and SW¼NE¼, NE¼SW¼,NW¼ SE¼	291
G58	Sec. 7, W½NE¼, NE¼NW¼	120
G59	Sec. 8, SW¼SW¼	40
G54	Sec. 9, SE¼SW¼	40
G60	Sec. 17, SW¼NE¼, S½NW¼	120
G61	Sec. 18, SE¼SE¼	40
G62	Sec. 20, SW¼ NE¼, SE¼NW¼, N½SW	160
G53	Sec. 22, N½NE¼, SE¼NE¼	120
G52B	Sec. 27, SW¼NE¼, S½NW¼	120
G52A	Sec. 28, S½NE¼, SE¼NW¼	120
G63ABC	Sec. 29, W½, N½SE¼, SW¼SE¼	140
G63ABC	Sec 30, SE¼NE¼, E½SE¼	120
G63ABC	Sec. 31, Lot 1 (38.68 acres), and N½NE¼, SE¼NE¼, NE¼NW¼, NE¼SE¼	239
G51	Sec. 34, NW¼NE, SE¼NE¼	80
G51	Sec. 35, SW¼NW¼	40
	T. 9 S., R. 29 E.	
G48	Sec. 21, SE¼NE¼	40
G49	Sec. 30, N½SE¼	80
G50A and G50B	Sec. 31, Lot 3 (43.39 acres), and SW¼NE¼, E½NW¼	163

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
	T. 9 S., R. 31 E.	
G47	Sec. 8, NW¼SE	40
G46	Sec. 15, SE¼SE¼	40
G45	Sec. 23, NE¼NW¼	40
	T. 9 S., R. 32 E.	
G38B	Sec. 4, Lot 1	41
G38A	Sec. 5, Lot 1 and 2 (40.98 and 41.06 acres, respectively)	82
G707, G708, and G44	Sec. 18, NE¼NE¼, SW¼NE¼, SE¼SW¼, SW¼SE¼	160
G39	Sec. 22, NW¼SW¼	40
G41	Sec. 27, SE¼SW¼	40
	T. 10 S., R. 27 E.	
G92	Sec. 1, Lot 1, SE¼NE¼	80
G85B	Sec. 3, SE¼NE¼	40
G85A	Sec. 5, NW¼SW¼, NW¼SE¼	80
G86	Sec. 10, W½NW¼, NW¼SW¼, SE¼SW¼	160
G709 and G90	Sec. 14, NE¼NE¼, NW¼SE¼	80
G87	Sec. 15, W½NW¼, NW¼SW¼	120
G710	Sec. 21, W½NW¼	80
G88	Sec. 22, S½SW¼	80
G89	Sec. 26, NW¼SW¼	40
G89 and G711	Sec. 27, NE¼SE¼, SW¼NW¼, W½SW¼	160
G712 and G713	Sec. 28, NW¼NE¼, SE¼NE¼	80

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
G714 and G715	Sec. 34, W½NE, NE¼NW¼, SE¼SW¼	240
	T. 10 S., R. 28 E.	
G93	Sec. 7, NW¼SW¼, NW¼SE¼	80
G94A and G94B	Sec. 16, SW¼NE¼, NW¼SW¼, SW¼SW¼, NW¼SE¼	160
G95	Sec. 22, SE¼SW¼	40
G96, G97, and G98	Sec. 23, NE¼NW¼, NW¼SW¼, SW¼SW¼	120
G98 and G99	Sec. 26, NW¼NW¼, SE¼SW¼	80
G95	Sec. 27, NW¼NE¼, N½NW¼	120
G100	Sec. 33, NW¼SE¼	40
	T. 10 S., R. 29 E.	
G103	Sec. 1, SE¼NE¼	40
G102	Sec. 13, SW¼NW¼	40
G102	Sec. 14, SE¼NE¼	40
G101	Sec. 30, Lot 2	41
	T. 10 S., R. 30 E.	
G104D	Sec. 21, SW¼NW¼	40
G103	Sec. 32, NE¼NW¼	40
	T. 10 S., R. 31 E.	
G716	Sec. 21, NW¼NE¼	40
G104A	Sec. 29, W½SW¼	80
G104B	Sec. 30, Lot 2	40
	T. 11 S., R. 27 E.	
G420	Sec. 9, Lot 1 (42.98 acres), and SE¼SE¼	83

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
G125	Sec. 11, N½NE¼	80
G422	Sec. 21, NE¼, SW¼NW¼, N½SE¼	280
G422/126	Sec. 22, N½NE¼, S½NW¼	160
G124	Sec. 23, NE¼	160
G122/717	Sec. 25, NW¼NW¼, NW¼SW¼, N½SE¼	160
G423	Sec. 27, NW¼NW¼	40
G127A and G127B	Sec. 34, E½NW¼, SW¼SW¼	120
G121	Sec. 36, N½NE¼, NE¼NW¼	120
	T. 11 S., R. 28 E.	
G111	Sec. 5, SE¼SW¼	40
G109/110	Sec. 6, Lot 1(40.80 acres), SE¼NE¼, SW¼SE¼	121
G113	Sec. 17, SW¼SW¼	40
G112	Sec. 18, NE¼NE¼, W½NE¼, NE¼NW¼, W½SE¼, NE¼SE¼	280
G113	Sec. 20, W½NW¼	80
G114	Sec. 21, NE¼NE¼	40
G119 and G120	Sec. 30, Lot 4 (45.89 acres), SE¼SW¼, SE¼SE¼	126
G118 and G120	Sec. 31, Lots 1 and 2 SE (46.15 and 46.45 acres), NE¼NW¼, NW¼SW¼	333
G115/ 117A/118	Sec. 32, N½NE¼, W½SW¼, SE¼SE¼	200
G116A	Sec. 33, SE¼SW¼	40
	T. 11 S., R. 29 E.	
G718	Sec. 29, SW¼, SW¼SE¼	200
G719/720	Sec. 30, Lot 3 (42.31 acres), NW¼NE¼	82

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
G718	Sec. 32, NW¼NE¼, NE¼NW¼	80
	T. 12 S., R. 27 E.	
G128/131B	Sec. 1, Lot 4 (40.53 acres), NW¼SW¼, S½SW¼, N½SE¼	241
G128/130	Sec. 2, Lots 14 (40.65, 40.75, 40.85, and 40.95 acres, respectively), S½N½, SW¼SE¼	363
G129	Sec. 3, SE¼SE¼	40
G292	Sec. 6, Lot 10	42
G130	Sec. 11, W½NE¼, E½NW¼	160
G131C	Sec. 12, E½, E½W½, NW¼NW¼	520
G131C	Sec. 13, NE¼, E½NW¼	240
G132	Sec. 15, NE¼NE¼	40
G424	Sec. 16, NW¼NW¼	40
G133B	Sec. 20, All	640
G134	Sec. 26, W½, W½E½	400
G133A	Sec. 28, W½NE¼, W½	400
G135	Sec. 34, All	640
	T. 12 S., R. 28 E.	
G116B	Sec. 4, Lots 1 and 2 (40.75, 40.65)	81
G117B/139A	Sec. 5, Lots 1 and 2 (40.42 and 40.47 acres, respectively), SW¼NE¼, SW¼	281
G137	Sec. 6, Lot 2 and 6 (40.38 and 53.39 acres, respectively), SW¼NE¼, NW¼SW¼, SW¼SE¼	214
G138/139A	Sec. 7, Lot 5 (46.04 acres), E½SE¼	126
G139A	Sec. 8, NW¼NE¼, S½NE¼, W½, N½SE¼	520
G139B	Sec. 9, E½NE¼, S½NW¼, S½	480
G140/141	Sec. 14, SW¼NW¼, W½SW¼, NE¼SE¼	160

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
G140	Sec. 15, NE¼	160
G721/ 139A	Sec. 17, NW¼NE¼, NW¼NW¼	80
G138/ 139A	Sec. 18, Lots 1 and 2 (53.62 and 53.67 acres, respectively), NE¼NE¼, E½NW¼	227
G142	Sec. 24, N½NW¼, SE¼NW¼, NW¼SW¼	160
	T. 12 S., R. 29 E.	
G145	Sec. 17, S½N½, NW¼SE¼	200
G143/144	Sec. 18, Lots 2 and 3 (40.53 and 40.48 acres, respectively), S½SE¼	161
G146	Sec. 20, NW¼NE¼	40
G147	Sec. 28, E½NW¼	80
G722	Sec. 34, W½SW¼	80
	T. 12 S., R. 30 E.	
G150A	Sec. 24, SE¼NE¼, W½, W½E½, NE¼SE¼	480
G150A/ 151A	Sec. 25, SE¼NE¼, NW¼NW¼	80
G149	Sec. 34, W½W½	160
	T. 12 S., R. 31 E.	
G152	Sec. 26, SW¼SE¼	40
G151B/ 151A	Sec. 30, Lots 3 and 4 (39.77 and 39.44 acres, respectively), and SE¼NE¼, SW¼NW¼, E½SW¼, E½SE¼)	319
	T. 12 S., R. 32 E.	
G157	Sec. 26, NW¼	160
G156	Sec. 28, N½NE¼, SE¼NE¼	120
G153 and G154	Sec. 30, Lot 4 (40.3 acres), and SW¼NE¼, SE¼NW¼,	120
G155	Sec. 32, NW¼SW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres
	T. 12 S., R. 33 E.	
G158	Sec. 5, Lot 2	40
G159	Sec. 15, SW¼NW¼	40
GG159	Sec. 16, S½NE¼, E½SE¼	160
G160	Sec. 17, W½E½	160
G723, G724, and G161A	Sec. 20, SE¼NE¼, SW¼NW¼, SW¼SW¼	120
	T. 13 S., R. 27 E.	
G136A	Sec. 2, N½, SE¼	480
G136B	Sec. 12, SE¼NE¼, NE¼SE¼	80
	T. 13 S., R. 28 E.	
G182	Sec. 14, N½	320
G193	Sec. 17, SE¼	160
G194	Sec. 18, Lots 3 and 4 (54.78 and 54.93 acres, respectively)	110
G193 and G194	Sec. 19, Lot 1 (54.87 acres), and E½NE¼	135
G193	Sec. 20, N½NE¼, SW¼NE¼, N½NW¼, SW¼NW¼	240
G184	Sec. 22, S½SE¼	80
G183B	Sec. 24, NE¼SE¼, SW¼SE¼	80
G190 and G191	Sec. 29, SW¼SW¼, SW¼SE¼	80
G725 and G192	Sec. 30, Lots 3 and 4 (54.62 and 54.97 acres, respectively), SE¼NW¼, NE¼SE¼	190
G189	Sec. 31, Lot 4	57
G187 and G188	Sec. 32, SE¼NW¼, E½SE¼	120

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
G186	Sec. 33, W½NE¼, SE¼NE¼, E½NW¼, NE¼SE¼	240
G185	Sec. 34, NW¼NE¼	40
	T. 13 S., R. 29 E.	
G181	Sec. 6, Lots 3,4,5,6 and 7 (40.37, 40.12, 40.36, 40.59, and 40.81 acres, respectively), and SE¼NW¼	242
G180	Sec. 8, All	640
G177 and G178	Sec. 24, NE¼, W½NW¼	240
G179	Sec. 28, W½SW¼	80
	T. 13 S., R. 30 E.	
G172	Sec. 4, SE¼SE¼	40
G175	Sec. 6, Lots 1 4 (40.12, 40.37, 40.62, and 40.87 acres, respectively)	162
G173 and G174	Sec. 14, NW¼NE¼, NE¼NW¼, S½SE¼	160
G176	Sec. 18, Lots 1 and 2, NE¼, E½NW¼ SE¼ (41.34, 41.41)	483
	T. 13 S., R. 31 E.	
G169B	Sec. 4, Lots 1 and 2 (40.24 and 40.03 acres, respectively), and S½NE¼, NW¼SW¼, SE¼	360
G171	Sec. 6, Lot 1	40
G726	Sec. 22, NW¼NE¼	40
G279 and G284A	Sec. 26, Lots 1,2,3,4,7,9,10 (2.5, 2.5, 2.5, 1.25, 1.25, 2.5, and 2.5 acres, respectively), and SW¼SW¼, W½SE¼SW¼)	135
G170	Sec. 28, S½SW¼	80
G281 and G284A	Sec. 35, W½W½, W½E½W½	240

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
G282, G283, and G298	Sec. 36, NE¼NW¼NE, S½NW¼NE¼, W½W½NW¼, W½NW¼SW¼, S½NE¼SW¼, SE¼SW¼	130
	T. 13 S., R. 32 E.	
G167	Sec. 8, SE¼SE¼	40
G168A and G168B	Sec. 20, NE¼, N½SW¼	240
	T. 13 S., R. 33 E.	
G165	Sec. 4, Lots 3 and 4 (40.18 and 40.45 acres, respectively), S½NW¼, SW¼	201
G166	Sec. 6, Lot 2 (40.56 acres), and SW¼NE¼, E½SE¼	161
G164	Sec. 22, NE¼NE¼	40
	T. 13 S., R. 34 E.	
G163	Sec. 24, SE¼NE¼, SE¼NW¼, N½SE¼	160
	T. 13 S., R. 35 E.	
G162	Sec. 30, Lot 2, SE¼NW¼ (39.61 acres)	80
	T. 14 S., R. 29 E.	
G197	Sec. 11, E½NE¼, N½S½	240
	T. 14 S., R. 30 E.	
G200	Sec. 3, NW¼SW¼	40
G198	Sec. 7, E½NE¼	80
G201	Sec. 11, NW¼SE¼	40
T. 14 S., R 31 E .		
G727	Sec. 2, SE¼SE¼	40
G203	Sec. 3, Lots 3 and 4 (33.74, 34.12)	68
G202	Sec. 5, Lots 3 and 4 (34.69 and 34.56 acres, respectively), NW¼SW¼	109

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
G210B	Sec. 15, NE¼NW¼, SE¼NE¼, NW¼SW¼, S½SW¼, W½SE¼	280
G210B4, G210B5, and G210B6	Sec. 21, N½NE¼, NE¼NW¼, NW¼SW¼, SE¼SW¼, SW¼SE¼	240
G210B1 and G210B3	Sec. 22, W½NE¼, SE¼NE¼, N½NW¼, SE¼SW¼, NW¼SE¼	280
G212	Sec. 23, NE¼SE¼	40
G210	Sec. 27, E½SE¼	80
G209A and G209B	Sec. 28, SE¼NW¼, SE¼	200
G206	Sec. 29, SW¼NW¼, NW¼SW¼	80
G204	Sec. 30, SW¼SE¼	40
G205	Sec. 31, SE¼NW¼, E½SW¼	120
G206 and G207	Sec. 32, SW¼NE¼, SE¼NW¼, SW¼SW¼, NW¼SE¼	160
G211	Sec. 34, NE¼SE¼	40
	T. 14 S., R. 32 E.	
G216 and G218	Sec. 1, Lots 1, 3 and 4 (34.13, 33.85, and 33.71 acres, respectively), and NW¼SW¼, NE¼SE¼	182
G216	Sec. 2, Lots 1 and 2 (33.55 and 33.37 acres, respectively), and SE¼	227
G214	Sec. 4, NW¼SE¼	40
G213	Sec. 9, SE¼NW¼, NW¼SW¼	80
G215	Sec. 10, NW¼NE¼	40
G217	Sec. 12, SW¼NW¼	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
	T. 14 S., R. 33 E.	
G219	Sec. 7, E½NE¼, NE¼SE¼	120
G219	Sec. 8, N½NW¼, SW¼NW¼	120
G426	Sec. 9, W½SW¼, NE¼SW¼, NW¼SE¼	160
	T. 16 S., R. 30 E.	
G728	Sec. 1, Lot 2	10
	T. 17 S., R. 26 E.	
G242, G241A, and G241B	Sec. 13, NE¼NE¼, SE¼NW¼, W½SE¼	160
G222	Sec. 17, NW¼NE¼	40
G224	Sec. 20, NW¼SW¼	40
G223	Sec. 22, SE¼NW¼	40
G240A	Sec. 25, NE¼SE¼, S½SE¼	120
G225 and G226	Sec. 29, SE¼NE¼, W½NW¼, N½SE¼	200
G225	Sec. 30, SE¼NE¼, NE¼SE¼, S½SE¼	160
G730 and G225	Sec. 31, W½NE¼, NW¼SE¼, SE¼SE¼	160
G730, G227, and G228	Sec. 32, NW¼NE¼, SW¼SW¼, NW¼SE¼	120
G239A	Sec. 35, SE¼	160
	T. 17 S., R. 27 E.	
G432	Sec. 1, NW¼SW¼	40
G432	Sec. 2, S½S½, NW¼SW¼	200
G428	Sec. 8, N½NE¼, SW¼NE¼, W½SE¼,	200

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
G429 and G430	Sec. 9, NW¼NW¼, E½SW, W½SE, SE¼SE¼, N½NE, SE¼NE¼	360
G286 and G431	Sec. 10, W½NE¼, NE¼NE¼, S½SE¼	200
G286	Sec. 11, NW¼NW¼	40
G289	Sec. 12, N½SE¼, SW¼SE¼	120
G289	Sec. 13, NW¼NE¼	40
G431 and G433	Sec. 15, E½NE¼, NW¼NW¼, S½NW¼, SW¼, NE¼SE¼	400
G428	Sec. 17, NW¼NE¼	40
G243	Sec. 18, NW¼SW¼	40
G246	Sec. 21, W½E½	160
G729	Sec. 26, NW¼SW¼	40
G247	Sec. 27, SW¼	160
G246	Sec. 28, E½, SE¼SW¼	360
G244 and G245	Sec. 29, E½NE¼, SW¼SE¼	120
G240B	Sec. 30, Lots 2, 3 and 4 (40.33, 40.36, 40.39)	122
G240C	Sec. 31, Lots 1-4 (40.38, 40.33, 40.28, 40.23)	161
G246B and G247	Sec. 33, N½, W½SW¼, SE¼	560
G247	Sec. 34, W½, S½SE¼	400
	T. 17 S., R. 28 E.	
G274	Sec. 35, E½SE¼	80
	T. 17 S., R. 29 E.	
G276	Sec. 6, Lot 3	39
G275	Sec. 19, SE¼NE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres
	T. 18 S., R. 26 E.	
G238	Sec. 1, S½SE¼	80
G239B	Sec. 2, Lots 1 and 2, S½NE¼, W½SE¼, (40.62, 40.50)	241
G229	Sec. 4, NW¼SW¼	40
G730	Sec. 5, Lot 4	40
G230A and G230B	Sec. 8, NW¼SW¼, SW¼SW¼	80
G231	Sec. 9, S½S½	160
G231	Sec. 10, S½SW¼	80
G237	Sec. 12, SW¼NE¼, S½NW¼, E½SW¼, NW¼SE¼	240
G237	Sec. 13, N½NW¼	80
G230B	Sec. 17, W½NW¼	80
G233	Sec. 19, NE¼SE¼	40
G232	Sec. 21, SW¼NE¼	40
G236B	Sec. 25, N½NW¼	80
G236A	Sec. 26, SE¼NE¼	40
G234 and G235	Sec. 28, NW¼NE¼, E½NW¼, S½SE¼	200
	T. 18 S., R. 27 E.	
G253	Sec. 2, SW¼SW¼	40
G247A	Sec. 3, Lots 3 and 4, S½NW¼, SW¼ (43.62, 43.54)	207
G247A	Sec. 4, Lots 1- 4, NE¼SE¼ (43.40, 43.23, 43.05, 42.88)	213
G248 and G250A	Sec. 5, Lots 3 and 4, S½SE¼ (42.23, 42.01)	164
G249	Sec. 6, SE¼SE¼	40
G250A	Sec. 8, NE¼, N½S½	320

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
G250B and G247A	Sec. 9, SE¼NE¼, SW¼NW¼	80
G247, G251, and G252	Sec. 10, N½NW¼, SW¼NW¼, SW¼SW¼, NW¼SE¼	80
G254	Sec. 11, S½NE¼	80
G254	Sec. 12, S½N½	160
	T. 18 S., R. 28 E.	
G274	Sec. 2, Lot 1	45
G257	Sec. 5, Lot 1, S½N½, NW¼SW¼ (57.86)	258
G256	Sec. 6, Lots 1,2,3,4,5,6 and 7, S½NE¼, SE¼NW¼, NW¼SW¼ (61.24, 62.39, 63.54, 68.30, 41.71, 41.19, 40.66)	539
G260	Sec. 7, S½NE¼, SE¼	240
G260	Sec. 8, NW¼NE¼, S½NE¼, NW¼, N½S½, SW¼SW¼	480
G260 and G262	Sec. 9, S½NW¼, NW¼SW¼, E½SE¼	200
G262	Sec. 10, W½SW¼, SE¼SW¼	120
G269 and G270	Sec. 11, SE¼NE¼, S½SW¼, NE¼SE¼	160
G271	Sec. 12, SE¼	160
G268	Sec. 14, SW¼SW¼	40
G263	Sec. 15, S½NW¼, N½SW¼	160
G261	Sec. 17, NE¼, NE¼NW¼, S½NW¼, SW¼, N½SE¼, SW¼SE¼	560
G261	Sec. 20, N½NW¼, SW¼NW¼	120
G265B and G264	Sec. 21, NE¼NE¼, SE¼SE¼	80
G265B	Sec. 22, S½SW¼	80

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
G267 and G268	Sec. 23, NW¼NW¼, SE¼	200
G267	Sec. 24, NW¼SW¼, S½SW¼	120
G265B	Sec. 27, All	640
G265B	Sec. 28, SW¼NE¼, W½SE¼, SE¼SE¼	160
G266	Sec. 33, E½E½	160
	T. 18 S., R. 29 E.	
G271	Sec. 7, Lots 3 and 4 (33.82 and 33.67 acres, respectively)	67
G272	Sec. 18, NW¼SW¼	40
G273	Sec. 19, Lot 3	35
Morrow County		
	T. 2 N., R. 27. E.	
M26	Sec. 6, unnamed lot in the NE¼NW¼	40
	T. 4 N., R. 23 E.	
M29	Sec. 22, 200feet wide diagonal strip, portion of SW¼NE¼ and SE¼NW¼ within railroad right-of-way.	8
	T. 4 N., R. 24 E.	
M32	Sec. 18, 200-feet wide diagonal strip, portion of Lot 5 within railroad right-of-way.	8
	T. 4. N., R. 26. E.	
M28	Sec. 8, S½NE¼, N½SW¼	160
	T. 2. S., R. 29 E.	
M24	Sec. 1, NW¼SE¼	40
	T. 3. S., R. 23 E.	
M30	Sec. 31, Lots 2, 3 and 4; E½SW¼, W½SE¼, SE¼SE¼ Sec. 32, SW¼SW¼	394
	T. 4 S., R. 28 E.	
M12	Sec.1, SE¼NE¼, N½SE¼	120

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
M11	Sec.15, NE¼NE¼	40
	T. 4 S., R. 29 E.	
M15	Sec. 3, NE¼SE¼	40
M16	Sec. 3, Lots 1 to 4, inclusive Sec. 4, Lots 1 and 2	94
M13	Sec. 6, SE¼SW¼, SW¼SE¼	80
	T. 5 S., R. 25 E.	
M7	Sec. 31, Lot 4	40
	T. 5 S., R. 26 E.	
M8	Sec. 11, SW¼SW¼	40
	T. 5 S., R. 27 E.	
M10	Sec. 3, NW¼SW¼	40
M9	Sec. 17, NE¼SE¼	40
M27	Sec. 20, southern portion of NW¼SW¼ not included within Corps of Engineers withdrawal.	16
	T. 6 S., R. 25 E.	
M5	Sec. 1, Lot 1	24
M2	Sec. 6, Lot 4	23
M1	Sec. 7, NE¼SE¼ Sec. 8, NW¼SW¼	80
M3	Sec. 9, NE¼SW¼	40
M4	Sec. 10, E½SW¼, S½SE¼	160
M31	Sec. 15, N½NE¼, NE¼NW¼	120
M6	Sec. 19, Lot 3	39
Umatilla County		
	T. 2 N., R. 28 E.	
UM19	Sec. 10, NW¼SW¼	40
UM18	Sec. 28, E½E½	160

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
	T. 3 N., R. 27 E.	
UM22	Sec. 2, SE¼SE¼	40
UM21	Sec. 12, S½SE¼	80
UM20	Sec. 24, SW¼	160
	T. 3 N., R. 36 E.	
UM39	Sec. 14, E½SW¼, NW¼SE¼ Sec. 23, NE¼NW¼	160
	T. 4 N., R. 27 E.	
UM66	Sec. 26, Lot 11, N½SW¼SE¼	28
	T. 4 N., R. 28 E.	
UM63	Sec. 14, N½S½SE¼SW¼ (portion located north of railroad)	6
	T. 4 N., R. 37 E.	
UM69	Sec. 5, Lot 4	48
	T. 5 N., R. 28 E.	
UM27	Sec. 22, Lot 1, E½SW¼SW¼	38
UM28	Sec. 26, W½NW¼SW¼, SW¼SW¼, N½SE¼SW¼	80
UM26	Sec. 28, NE¼NE¼	40
UM67	Sec. 28, NE¼SE¼	40
UM25	Sec. 28, SE¼SE¼	40
UM23	Sec. 32, W½NE¼	80
UM24	Sec. 34, S½SW¼NW¼	20
	T. 5 N., R. 29 E.	
UM29	Sec. 20, SW¼	160
UM68	Sec. 22, SW¼NW¼	40
UM30	Sec. 34, NE¼NE¼	40
	T. 5 N., R. 30 E.	
UM34	Sec. 4, SE¼NE¼	40
UM31	Sec. 10, S½	320

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
UM33	Sec. 11, E½W½	160
UM32	Sec. 13, SE¼	160
	T. 5 N., R. 31 E.	
UM37	Sec. 2, Lot 3	35
UM36	Sec. 8, SW¼SE¼	40
	T. 6 N., R. 30 E.	
UM35	Sec. 35, SE¼	160
	T. 6 N., R. 32 E.	
UM38	Sec. 15, Lot 4	40
	T. 1 S., R. 30 E.	
UM17	Sec. 8, SW¼NE¼	40
	T. 1 S., R. 35 E.	
UM62	Sec. 25, Lot 2	40
	T. 2 S., R. 31 E.	
UM64	Sec. 12, NE¼NE¼	40
	T. 3 S., R. 30 E.	
UM16	Sec. 24, SW¼SE¼	40
	T. 3 S., R. 30½ E.	
UM15	Sec. 26, Lot 3	23
UM14	Sec. 35, Lots 1 to 4, inclusive	92
	T. 4 S., R. 31 E.	
UM6	Sec. 19, Lot 4 Sec. 30, Lots 1, 2 and 3, SE¼NW¼, E½SW¼	273
	T. 4 S., R. 30 E.	
UM13	Sec. 1, Lot 2	13
UM12	Sec. 2, Lot 1	15
UM11	Sec. 2, Lot 4	17
UM8	Sec. 9, SW¼SE¼	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
UM9	Sec. 10, SE¼SW¼	40
UM10	Sec. 10, NW¼SE¼	40
UM7	Sec. 13, N½NW¼	80
	T. 5 S., R. 31 E.	
UM5	Sec. 6, SE¼NE¼	40
UM4	Sec. 18, Lots 2 and 3	79
	T. 5 N., R. 37 E.	
UM40	Sec. 23, S½SE¼	80
UM41	Sec. 27, NE¼NE¼	40
UM42	Sec. 27, NE¼SE¼	40
	T. 5 N., R. 38 E.	
UM46	Sec. 8, SE¼SE¼	40
UM45	Sec. 17, Lots 1, 8 and 9, NE¼SE¼	134
UM43	Sec. 19, W½NE¼, E½NW¼	160
UM44	Sec. 19, NE¼SE¼	40
	T. 2 S., R. 33 E.	
UM77	Sec. 4, Lot 2 Sec. 5, Lots 10, 11 and 13 Sec. 9, Lots 5 and 8 Sec. 11, Lot 3	70
UM72	Sec. 13, Lot 6	15
UM78	Sec. 19, Lot 4	40
UM79	Sec. 19, Lot 16	34
	T. 2 S., R. 34 E.	
UM74	Sec. 13, Lot 5	5
	T. 3 S., R. 31 E.	
UM47	Sec. 17, S½SW¼	80
	T. 3 S., R. 32 E.	
UM48	Sec. 2, W½SE¼	80

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
	T. 4 S., R. 31 E.	
UM49	Sec. 12, SW¼NW¼	40
UM50	Sec. 12, SW¼NE¼	40
UM51	Sec. 12, SW¼SE¼	40
UM52	Sec. 23, SE¼SE¼	40
UM54	Sec. 26, SW¼SE¼	40
UM53	Sec. 28, W½NE¼	80
	T. 4 S., R. 32 E.	
UM55	Sec. 18, N½NE¼	80
	T. 5 S., R. 31 E.	
UM57	Sec. 17, N½SE¼	80
	T. 5 S., R. 32 E.	
UM58	Sec. 23, NE¼SE¼	40
	T. 5 S., R. 33 E.	
UM59	Sec. 19, SE¼NW¼	40
UM60	Sec. 21, SW¼NW¼	40
UM59A	Sec. 30, SE¼NW¼	40
	T. 5 S., R. 31 E.	
UM70	Sec. 21, SW¼NW¼	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
UM75	T. 5 N., R. 31 E. Sec. 3, Lot 4, S½NW¼; Sec. 4, Lots 1-4, inclusive, SE¼NE¼, SW¼NW¼, W½SW¼ Sec. 5, Lots 1 and 2, S½NE¼, SE¼ Sec. 6, Lots 1, 2, 6 and 7, S½NE¼,E½SW¼, SE¼ Sec. 7, Lot 1, NW¼NE¼ Sec. 8, NE¼NW¼ **T. 6 N., R. 31 E.** Sec. 27, SE¼SW¼,W½SE¼ Sec. 28, Lots 14 and 15 Sec. 29, Lot 16 Sec. 31, Lots 2, 3, and 4, SE¼NW¼, E½SW¼, SE¼ Sec. 32, Lots 1, 2, 6, 7, 9, 12, 13, and 16-20, inclusive Sec. 33, Lots 1, 2, and 7-10, inclusive Sec. 34, NW¼NE¼, N½NW¼, SW¼NW¼	2,798
	T. 6 N., R. 31 E.	
UM76	Sec. 17, Lot 3	37
	T. 6 S., R. 33 E.	
UM80	Sec. 5, Lot 4, SW¼NW¼	69
UM61	Sec. 6, Lot 5	33
Union County		
	T. 1 N., R. 38 E.	
UN1	Sec. 32, S½NW¼, SW¼	240
	T. 2 N., R. 39 E.	
UN68	Sec. 6, lot 3	40
	T. 2 N., R. 41 E.	
UN69	Sec. 31, NW¼NE¼	40
	T. 2 S., R. 36 E.	
UN2	Sec. 4, S½NW¼	80
UN61	Sec. 5, SW¼SW¼	40
UN3	Sec. 18, SE¼SW¼ Sec. 19, W½NE¼, NE¼NW¼	160

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
UN4	Sec. 24, NW¼SW¼	40
	T. 2 S., R. 37 E.	
UN5	Sec. 27, SE¼NW¼	40
UN6	Sec. 35, SW¼SW¼	40
	T. 3 S., R. 35 E.	
UN71	Sec. 1, SW¼NE¼	40
UN9	Sec. 23, SW¼NE¼, N½SE¼	120
UN64	Sec. 24, NW¼NW¼	40
UN63	Sec. 25, SE¼SW¼	40
UN10	Sec. 26, NE¼SE¼	40
	T. 3 S. R. 36 E.	
UN8	Sec. 21, SE¼SW¼	40
	T. 3 S., R. 37 E.	
UN7	Sec. 7, SW¼NE¼, N½SE¼ Sec. 8, NW¼SW¼	160
	T. 3 S., R. 40 E.	
UN21	Sec. 25, W½SW¼	80
UN22	Sec. 35, NE¼SE¼	40
	T. 3 S., R. 41 E.	
UN24	Sec. 31, NE¼NE¼	40
UN25	Sec. 32, Lots 3 and 4, N½SW¼	156
	T. 4 S., R. 35 E.	
UN11	Sec. 4, NE¼SW¼	40
UN12	Sec. 17, SE¼SE¼	40
UN29	Sec. 29, N½NW¼	80
	T. 4 S., R. 40 E.	
UN23	Sec. 1, Lot 3	44

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres
	T. 4 S., R. 41 E.	
UN26	Sec. 5, Lots 1, 2 and 3	120
UN27	Sec. 9, E½NW¼	80
UN28	Sec. 33, SW¼SE¼	40
	T. 5 S., R. 38 E.	
UN16	Sec. 2, NW¼SW¼ Sec. 3, E½SE¼	120
UN17	Sec. 3, W½SW¼	80
UN18	Sec. 10, W½W½	160
UN19	Sec. 11, S½NW¼, SW¼	240
UN20	Sec. 11, SE¼SE¼ Sec. 12, SW¼SW¼	80
UN62	Sec. 14, SW¼SW¼ Sec. 15, S½N½, NW¼SW¼, E½SE¼	320
UN15	Sec. 31, SW¼	160
	T. 5 S., R. 39 E.	
UN30	Sec. 1, NE¼SW¼	40
UN31	Sec. 3, NE¼SE¼	40
UN32	Sec. 14, NE¼NE	40
UN33	Sec. 14, W½SE¼	80
	T. 5 S., R. 40 E.	
UN34	Sec.15, NW¼NW¼	40
UN35	Sec.15, NE¼SW¼	40
UN36	Sec. 22, SW¼NE¼	40
	T. 5 S., R. 41 E.	
UN37	Sec. 10, NW¼NE¼	40
UN38	Sec. 15, SW¼NE¼	40
UN39	Sec. 30, SE¼SW¼	40
UN41	Sec. 32, S½SE¼	80

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
UN42	Sec. 33, NE¼SW¼	40
	T. 6 S., R. 35 E.	
UN14	Sec. 1, E½SW¼	80
	T. 6 S., R. 38 E.	
UN65	Sec. 18, NE¼NW¼	40
	T. 6 S., R. 40 E.	
UN45	Sec. 3, SW¼NE¼	40
UN46	Sec. 13, SW¼NE¼	40
UN66	Sec. 17, NW¼NE¼	40
UN48	Sec. 24, SW¼SE¼ Sec. 25, NE¼NW	80
UN70	Sec. 26, NE¼NW¼	40
	T. 6 S., R. 41 E.	
UN49	Sec. 5, Lot 3	41
UN50	Sec. 20, SE¼NW¼	40
UN51	Sec. 21, E½NW¼	80
UN52	Sec. 28, NE¼NW¼	40
UN53	Sec. 30, Lot 3	41
UN54	Sec. 33, SW¼SW¼	40
UN55	Sec. 34, NW¼NE¼	40
UN56	Sec. 36; Lots 1, 2, and 3; NW¼NE¼	81
UN57	Sec. 36, Lots 48, inclusive	43
	T. 6 S., R. 42 E.	
UN59	Sec. 30, W½NE¼	80
UN58	Sec. 31, Lot 3	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
Baker County		
	T. 6 S., R. 40 E.	
B190	Sec. 8, SE¼SW¼ Sec. 17, NE¼NW¼. (UN66NW¼NE¼)	80
B189	Sec. 18, Lot 6	16
	T. 7 S., R. 38 E.	
B191	Sec. 8, NE¼SE¼	40
B192	Sec. 30, NW¼NE¼	40
B193	Sec. 31, Lot 4	36
	T. 7 S., R. 39 E.	
B17	Sec. 26, W½SE¼, SE¼SE¼ Sec. 35, N½NE¼	200
B185	Sec. 26, SW¼NW¼, W½SW¼ Sec. 27, SE¼NE¼	160
B186	Sec. 27, NW¼NE¼	40
	T. 7 S., R. 40 E.	
B187	Sec. 6, Lot 7 and 10	14
B188	Sec. 20, NE¼SE¼ Sec. 21, W½NW¼, NW¼SW¼	160
B24	Sec. 26, NE¼NE¼	40
	T. 7 S., R. 41 E.	
B33	Sec. 1, NW¼SW¼	40
B34	Sec. 4, Lots 3 and 4, SE¼NW¼, NE¼SW¼	161
B43	Sec. 7, Lots 1 and 2	74
B207	Sec. 10, W½SE¼, SE¼SE¼	160
B36	Sec. 12, SW¼SW¼	40
B37	Sec. 14, SE¼NE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
B38	Sec. 23, SE¼NW¼	40
B39	Sec. 26, SE¼NE¼, E½SW¼, SE¼ Sec. 35, N½NE¼, SE¼NE¼, NE¼NW¼	440
	T. 7 S., R. 42 E.	
B209	Sec. 5, Lots 1, 2 and 3	118
	T. 7 S., R. 46 E.	
B244	Sec. 26, W½SW¼NW¼	20
B243	Sec. 27, S½ Sec. 34, N½, E½SE¼ Sec. 35, SW¼SW¼.	760
	T. 7 S., R. 46 E. and T. 7 S., R. 47 E.	
B118	T. 7 S., R. 46 E. Sec. 25, N½NE¼, SE¼NE¼, E½SE¼ Sec. 36, E½NE¼, NE¼SE¼ T. 7 S., R. 47 E. Sec. 30, Lots 1-4, inclusive Sec. 31, Lots 1 and 2	569
	T. 7 S., R. 47 E	
B123	Sec. 31, NE¼NE¼	40
B124	Sec. 31, S½SW¼NE¼	20
	T. 8 S., R. 38 E.	
B194	Sec. 5, Lots 2 and 3, SE¼NW¼	118
B195	Sec. 14, Lot 1	40
B196	Sec. 14, Lot 3	7
B198	Sec. 27, E½SE¼	80
B197	Sec. 28, W½SW¼	80
B199	Sec. 35, SW¼NE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres
	T. 8 S., R. 41 E.	
B44	Sec. 7, Lot 4	39
B45	Sec. 9, W½SE¼	80
B46	Sec. 19, N½NE¼	80
B47	Sec. 28, N½SE¼	80
B206	Sec. 29, SW¼SE¼	40
B205	Sec. 33, NE¼NE¼ Sec. 34, NW¼NW¼	80
	T. 8. S., R. 42 E.	
B57	T. 8 S., R. 42 E. Sec. 24, E½E½ T. 8 S., R. 43 E. Sec. 19, Lots 1, 2 and 3, W½NE¼, E½N¼, NE¼SW¼, NW¼SE¼	541
	T. 8 S., R. 44 E.	
B237	Sec. 8, NE¼SE¼	40
B93	Sec. 13, SE¼SE¼	40
B94	Sec. 15, Lot 3	28
B231	Sec. 15, Lot 8	18
B235	Sec. 16, Lot 11	22
B236	Sec. 16, Lots 12 and 13, American Lode, Tiger Lily Lode	80
B238	Sec. 19, Lot 13	41
B239	Sec. 19, Lots 16, 17, 19, 20 and 21 Sec. 30, Lots 7 and 8	81
B95	Sec. 21, Lots 1 and 2, Ollie Woodman Lode	26
B98	Sec. 22, Lot 3	11

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
	T. 8 S., R. 44 E. (and T. 9 S., R. 44 E.)	
B230	T. 8 S., R. 44 E. Sec. 34, E½SE¼ Sec. 35, SE¼NW¼, SW¼ T. 9 S., R. 44 E. Sec. 2, Lot 4	319
	T. 8. S., R. 44 E. (and T. 8 S., R. 45 E.)	
B240	T. 8 S., R. 44 E. Sec. 13, NE¼NE¼ T. 8 S., R. 45 E. Sec. 18, Lot 1, NE¼NW¼	119
	T. 8 S., R. 45 E.	
B241	Sec. 18, S½NE¼, N½SE¼, SW¼SE¼.	200
	T. 8 S., R. 46 E.	
B119	Sec. 1, Lot 2	40
	T. 8 S., R. 47 E.	
B246	Sec. 2, Lots 3 and 4, S½NW¼, SW¼ Sec. 3, Lots 1and 2, S½NE¼, N½SE¼, SE¼SE¼	608
B248	Sec. 15, E½NW¼, NE¼SW¼	120
B250	Sec. 17, NE¼, N½SE¼	240
	T. 9 S., R. 37 E.	
B28	Sec. 29, Lots 10 and 17	14
B61	Sec. 29, Lot 12	2
B35	Sec. 29, Lot 14	9
B59	Sec. 29, Lot 15	10
	T. 9 S., R. 39 E.	
B184	Sec. 34, SE¼NW¼, NE¼SW¼	80

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
	T. 9 S., R. 40 E.	
B25	Sec. 26, S½NE¼, N½NW¼, SE¼NW¼, N½SW¼,W½SE¼ Sec. 27, E½NE¼,SW¼NE¼,NE¼SE¼ Sec. 35, NW¼NE¼	400
B27	Sec. 34, SW¼NW¼, W½SW¼, SE¼SW¼	160
	T. 9 S., R. 41 E.	
B201	Sec. 21, E½NE¼NE¼	20
B202	Sec. 24, NW¼SW¼	40
	T. 9 S., R. 42 E.	
B58	Sec. 25, S½S½	160
B203	Sec. 30, Lot 3, SW¼NE¼, NE¼SW¼, W½SE¼ Sec. 31, W½NE¼, SE¼NE¼	320
	T. 9 S., R. 43 E.	
B79	Sec. 5, Lot 3	40
B74	Sec. 30, Lot 3	38
B75	Sec. 31, N½NE¼	80
B76	Sec. 32, SW¼NW¼, NW¼SW¼	80
	T. 9 S., R. 44 E.	
B229	Sec. 3, SW¼NE¼, NW¼SE¼	80
B99	Sec. 23, SE¼NW¼	40
B100	Sec. 23, S½SE¼ Sec. 26, NW¼NE¼	120
B96	Sec. 26, NE¼SE¼, S½SE¼	120
B102	Sec. 27, NW¼NW¼	40
B103	Sec. 27, NW¼SE¼	40
B105	Sec. 34, SW¼SE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
	T. 9. S., R. 44 E. (and T. 9 S., R. 45 E.)	
B101	T. 9 S., R. 44 E. Sec. 24, SE¼E¼ T. 9 S., R. 45 E. Sec. 19, Lots 2, 3, and 4, E½SW¼	238
	T. 9 S., R. 44 E. (and T. 10 S., R. 44 E.)	
B104	T. 9 S., R. 44 E. Sec. 31, E½SW¼, NW¼SE¼ T. 10 S., R. 44 E. Sec. 6, Lots 3 and 4	197
	T. 9 S., R. 45 E.	
B242	Sec. 4, SW¼NE¼	40
B114	Sec. 30, Lot 3	39
	T. 9 S., R. 46 E. (and T. 9 S., R. 47 E.)	
B249	T. 9 S., R. 46 E. Sec. 1, S½SW¼, SW¼SE¼ Sec. 12, NE¼, E½NW T. 9 S., R. 47 E. Sec. 6, S½SE¼ and Sec. 7, Lots 1, 2, 3 and 4, NE¼, W½NW¼, E½SW¼, NW¼SE¼.	955
	T. 9 S., R. 47 E.	
B253	Sec. 8, SE¼SE¼	40
B254	Sec. 9, NE¼SW¼	40
B252	Sec. 8, SE¼SW¼, and Sec. 17, NE¼NW¼	80
	T. 10 S., R. 39 E.	
B180	Sec. 10, W½NW¼	80
B18	Sec. 13, W½NE¼, SE¼NW¼	120

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
B19	Sec. 13, W½SW¼, SE¼SW¼ Sec. 14, SE¼SE¼	160
B182	Sec. 14, NW¼NW¼	40
B183	Sec. 14, SE¼NW¼, NE¼SW¼	80
B181	Sec. 15, SW¼NE¼	40
B20	Sec. 33, SW¼SW¼	40
	T. 10 S., R. 40 E.	
B40	Sec. 1, that part of Lot 1 in the S½NE¼; and that part of Lot 2 in the N½NE¼, N½SE¼	240
B41	Sec. 3, that part of Lot 1 in the SW¼NW¼; and that part of Lot 2 in the NW¼NW¼, NW¼SW¼	120
	T. 10 S., R. 41 E.	
B200	Sec. 3, SW¼NW¼	40
B48	Sec. 9, NE¼NE¼	40
B49	Sec. 10, SE¼SE¼	40
B50	Sec. 12, S½NE¼	80
B51	Sec. 12, SE¼SE¼ Sec. 13, NE¼NE¼ Sec. 18, Lot 1	120
B52	Sec. 14, E½NW¼, NE¼SW¼	120
B53	Sec. 15, N½SW¼, SE¼SW¼	120
B54	Sec. 18, N½SE¼	80
B56	Sec. 21, SE¼NW¼	40
B55	Sec. 21, NE¼NE¼ Sec. 22, NW¼NW¼	80

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
	T. 10 S., R. 41 E. (and R. 42 E.; and T. 11 S., R. 42 E.)	
B204	T. 10 S., R. 41 E. Sec. 25, SE¼SE¼ Sec. 36, E½NE¼ T. 10 S., R. 42 E. Sec. 30, Lot 4, SE¼SE¼ Sec. 31, Lot 1, NE¼, NE¼NW¼ N½SE¼ Sec. 32, SW¼NE¼, S½NW¼, N½SW¼, SE¼SW¼, SE¼ Sec. 33, W½SW¼ T. 11 S., R. 42 E. Sec. 4, Lot 4 Sec. 5, Lot 1, SE¼½NE¼	1,120
	T. 10 S., R. 42 E.	
B60	Sec. 6, SW¼SE¼	40
B62	Sec. 17, SE¼SW¼	40
B64	Sec. 18, SE¼SW¼	40
B65	Sec. 18, E½SE¼	80
	T. 10 S., R. 43 E.	
B77	Sec. 3, SE¼SE¼	40
B78	Sec. 4, N½SW¼, SE¼SW¼ Sec. 5, SW¼NE¼ N½SE¼	240
B79	Sec. 5, Lot 3	40
B81	Sec. 5, SW¼SW¼	40
B82	Sec. 11, E½SW¼	80
B83	Sec. 23, SE¼NE¼, N½SE¼ Sec. 24, NW¼SW¼	160
B84	Sec. 26, E½NE¼	80
	T. 10 S., R. 44 E.	
B106	Sec. 2, SW¼SW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
B107	Sec. 3, NW¼SE¼	40
B228	Sec. 11, SW¼NW¼	40
B226	Sec. 15, E½NE¼	80
B227	Sec. 15, NE¼NW¼	40
B109	Sec. 18, Lots 2 and 3	77
B80	Sec. 21, N½NW¼	80
B90	Sec. 21, SW¼SE¼	40
B91	Sec. 27, N½NE¼	80
B92	Sec. 29, NW¼NW¼	40
B97	Sec. 31, Lot 1	33
B108	Sec. 31, Lot 4	33
B113	Sec. 31, NE¼SE¼	40
B122	Sec. 34, SE¼NE¼	40
B125	Sec. 35, SE¼SE¼	40
	T. 11 S., R. 38 E.	
B127	Sec. 26, NW¼NW¼	40
B128	Sec. 27, N½NW¼, SE¼NW¼	120
B129	Sec. 33, NW¼NE¼	40
B130	Sec. 34, SW¼SW¼	40
B131	Sec. 36, SW¼	160
	T. 11 S., R. 39 E.	
B21	Sec. 2, Lots 1 and 2	70
B251	Sec. 11, E½SE¼SW¼	20
B22	Sec. 31, Lot 3	33
	T. 11 S., R. 40 E.	
B176	Sec. 5, SE¼SW¼.	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
B42	Sec. 6, SE¼NE¼	40
B179	Sec. 6, SE¼SW¼ Sec. 7, E½NW¼, E½SW¼, SW¼SE¼	240
B178	Sec. 7, E½NE¼ Sec. 8, W½NW, N½SW¼	240
B177	Sec. 8, N½NE¼ Sec. 9, N½NW¼	160
	T. 11 S., R. 42 E.	
B66	Sec. 3, NW¼SW¼	40
B67	Sec. 4, S½NE¼	80
B68	Sec. 8, SW¼NW¼	40
	T. 11 S., R. 43 E.	
B218	Sec. 14, S½ Sec. 15, S½ Sec. 16, E½SE¼ Sec. 22, N½NE¼, NE¼NW¼ Sec. 23, N½NW¼	920
B85	Sec. 23, N½SW¼, NW¼SE¼	120
B217	Sec. 26, S½NW¼	80
B86	Sec. 31, SW¼SE¼	40
B87	Sec. 35, NE¼SW¼	40
B88	Sec. 36, N½	320
	T. 11 S., R. 44 E.	
B110	Sec. 19, Lot 1	10
B111	Sec. 33, SE¼SW¼	40
	T. 11 S., R. 46 E.	
B121	Sec. 7, Lots 1-4, inclusive, E½SW¼, N½SE	321
	T. 12 S., R. 36 E.	
B132	Sec. 22, SE¼SE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres
B133	Sec. 23, SE¼NW¼	40
B134	Sec. 24, SW¼SW¼	40
B135	Sec. 25, E½SW¼	80
	T. 12 S., R. 37 E.	
B136	Sec. 7, Lot 3	34
B137	Sec. 7, N½SE¼, SE¼SE¼	120
B138	Sec. 8, NE¼NE¼	40
B139	Sec. 12, NE¼SE¼	40
B2	Sec. 13, SE¼NW¼, NE¼SW¼	80
B3	Sec. 14, SE¼NE¼	40
B4	Sec. 14, E½NW¼	80
B140	Sec. 19, SW¼NE¼	40
B141	Sec. 21, SW¼NE¼	40
B142	Sec. 21, NE¼NW¼	40
B143	Sec. 31, Lots 2 and 3	68
	T. 12 S., R. 38 E.	
B145	Sec. 10, SW¼SW¼	40
B146	Sec. 34, S½SE¼	80

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
	T. 12 S., R. 38 E. (and T. 12 S., R. 39 E.)	
B144	T. 12 S., R. 38 E. Sec. 1, S½NE¼, E½SW¼, N½SE¼ Sec. 12, SE¼ Sec. 13, NE¼,SW¼, N½SE¼, SE¼SE¼ Sec. 14, S½N½, N½S½ Sec. 15, S½NE¼, E½NW¼, N½SE¼, SE¼SE¼ Sec. 22, E½NE¼, NE¼SE¼ Sec. 24, W½ T. 12 S., R. 39 E. Sec. 6, Lots 4 to 7, inclusive, E½SW¼; Sec. 7, Lots 1 to 4, inclusive, E½W½, SE¼.	2,534
	T. 12 S., R. 38 E.	
B11	Sec. 2, Lot 2	40
B12	Sec. 2, SW¼SE¼.	40
B13	Sec. 4, Lot 3	41
B15	Sec. 19, E½SE¼ Sec. 20, N½SW¼, SW¼SW¼, NW¼SE¼	240
	T. 12 S., R. 39 E.	
B23	Sec. 5, Lot 1, SE¼NE¼	72
B161	Sec. 35, SE¼SE¼ Sec. 36, SW¼NW¼, W½SW¼	160
	T. 12 S., R. 40 E.	
B29	Sec. 28, NW¼SW¼	40
B30	Sec. 29, SE¼SW¼	40
B162	Sec. 31, Lot 1	39
B163	Sec. 32, SW¼NW¼	40
	T. 12 S., R. 42 E.	
B212	Sec. 1, Lot 3	35
B210	Sec. 10, NE¼SW¼, NW¼SE¼	80

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres
B211	Sec. 11, SW¼SE¼	40
	T. 12 S., R. 43 E.	
B215	Sec. 5, SW¼SE¼	40
B213	Sec. 7, SW¼NE¼, NW¼SE¼	80
B214	Sec. 7, NE¼NE¼ Sec. 8, NW¼NW¼	80
	T. 12 S., R. 43 E. (and T. 12 S., R. 44 E.)	
B219	T. 12 S., R. 43 E. Sec. 24, NE¼SE¼ T. 12 S., R. 44 E. Sec. 19, Lot 3, NE¼SW¼	123
	T. 12 S., R. 44 E.	
B112	Sec. 31, Lots 2, 3 and 4	131
	T. 13 S., R. 36 E.	
B1	Sec. 15, SW¼NE¼	40
	T. 13 S., R. 37 E.	
B5	Sec. 5, S½NE¼	80
B147	Sec. 5, SW¼SW¼ Sec. 6, SE¼SW¼, S½SE¼	160
B6	Sec. 9, NE¼NE¼	40
B148	Sec. 15, SE¼SW¼, SW¼SE¼, N½SE¼ (portion south of U.S.Highway 26) Sec. 22, NE¼NW¼	160
B149	Sec. 21, SW¼NE¼, SE¼SW¼, SE¼; Sec. 28, N½NE¼	320
B150	Sec. 22, SW¼NW¼	40
B154	Sec. 23, NE¼ (portion south of U.S.Highway 26), E½NW¼, NW¼NW¼ Sec. 14, S½SW¼ (portion south of U.S.Highway 26)	280

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**
B8	Sec. 27, NW¼SW¼	40
B9	Sec. 30, SE¼NW¼	40
	T. 13 S., R. 38 E.	
B175	Sec. 34, NE¼SE¼	40
	T. 13 S., R. 39 E.	
B158	Sec. 10, E½NW¼, SW¼NW¼	120
B159	Sec. 12, NE¼SE¼	40
	T. 13 S., R. 40 E.	
B31	Sec. 2, Lot 3	40
B164	Sec. 5, Lot 3	41
B165	Sec. 5, SE¼NE¼	40
B166	Sec. 5, SW¼SW¼	40
B173	Sec. 6, Lots 2, 3 and 4	118
B160	Sec. 7, Lot 2	39
B32	Sec. 9, SE¼NW¼, NE¼SW¼, SE¼ Sec. 10, N½SW¼.	320
B168	Sec. 11, SE¼NW¼	40
B169	Sec. 12, SE¼SW¼, SW¼SE¼	80
	T. 13 S., R. 41 E.	
B171	Sec. 11, SW¼NW¼	40
	T. 13 S., R. 44 E.	
B220	Sec. 23, SW¼NW¼, W½SW¼.	120
B221	Sec. 26, NE¼NW¼.	40
	T. 13 S., R. 45 E.	
B116	Sec. 30, Lot 3	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres
	T. 14 S., R. 37 E.	
B10	Sec. 6, Lot 3	38
	T. 14 S., R. 38 E.	
B16	Sec. 4, Lot 3, SE¼NW¼	80
	T. 14 S., R. 44 E.	
B224	Sec. 11, W½E½ Sec. 14, W½E½	320
B225	Sec. 15, E½E½	160
	T. 14 S., R. 45 E.	
B117	Sec. 19, SW¼NE¼, W½SE¼ Sec. 30, N½NW¼NE¼	140

Summary of Potential Disposal Parcels

Total Acres of Potential Disposal Parcels Identified to Date, by County

Grant County	46,752
Wheeler County	3,066
Morrow County	1,690
Umatilla County	7,602
Union County	4,606
Baker County	26,048
TOTAL	89,764 acres

* Acres are estimates (rounded up/down to nearest acre) and may be more or less.

Table A-1b. Public Lands Considered for Disposal in Northeast Oregon Assembled Land Exchange.

On this table, the parcels are listed by parcel number according to basin and county (Wheeler-W, Grant-G, Morrow-M, Umatilla-UM, Union-UN, and Baker-B) in consecutive ascending order, to the extent possible. In cases where two or more parcels have the same township and range, the parcels are grouped. There are some cases where a piece of land includes two or more parcels, which disrupts the consecutive numerical order. Also, because the parcels are listed by parcel numbers, the legal descriptions (townships, ranges, and sections) are not listed in sequence. However, for reference purposes, Table A-1a lists the potential disposal parcels by legal description, with townships, ranges, and sections in ascending order. Identical information is provided on both tables.

A summary listing total acres identified for disposal, to date, by county is presented at the end of the table.

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
Wheeler County		
	T. 6 S., R. 23 E.	
W1	Sec. 23, NE¼ SW¼	40
	T. 7. S, R. 22 E.	
W2 and W3	Sec. 12, Lot 3, NW¼NE¼	34
W4	Sec. 14, NW¼SE¼	40
W5	Sec. 20, SW¼NE¼	40
W6	Sec. 23, NW¼SW¼	40
W7 and W8	Sec. 25, NE¼NE¼, S½NW¼	120
W8 and W9	Sec. 26, S½NE¼, SE¼SE¼	120
W10	Sec. 34, NE¼SW¼	40
	T. 8 S., R. 22. E.	
W11 and W15	Sec. 1, Lots 1,3 and 5 (37.97, 38.91, and 34.60 acres, respectively)	111

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
W12	Sec. 10, Lot 4	37
W13	Sec. 11 SE¼SW¼	40
	T. 8 S., R. 23 E.	
W14	Sec. 9, S½SW¼	80
	T. 8. S., R. 22 E.	
W16	Sec. 4, SE¼NW¼	40
W17	Sec. 6, SE¼SW¼	40
W17	Sec. 7, Lot 6, NE¼NW¼	81
	T. 8 S., R. 23 E.	
W18	Sec. 19, E½SW¼, SW¼SE¼	120
	T. 8. S., R. 22 E.	
W19	Sec. 24, Lots 3 and 4 (30.43 and 30.89 acres, respectively), and W½W½	381
W19	Sec. 25, Lots 1-4 (31.36, 31.83, 32.3, and 32.77 acres, respectively) and W½NE¼, NW¼SE¼	248
	T. 8 S., R. 23 E.	
W20	Sec. 30, Lots 2 and 3 (38.82 and 38.94 acres, respectively), SE¼SW¼	118
	T. 8. S., R. 22 E.	
W21	Sec. 35, N½NE¼	80
W21 and W22	Sec. 26, Lots 1 and 2 (35.19 and 35.09 acres, respectively) and NW¼SE¼, S½SE¼	190
	T. 8 S., R. 21 E.	
W24A	Sec. 5, Lot 1	28
W24B	Sec. 14, Lot 5	38
	T. 8 S., R. 23 E.	
W32	Sec. 23, NW¼NE¼	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
	T. 8 S., R. 24 E.	
W33	Sec. 5, SE¼SW¼	40
W33	Sec. 8, NE¼NW¼, S½NW	120
W34	Sec. 10, NW¼SW¼	40
W35	Sec. 17, SW¼SW¼	40
W36	Sec. 21, NW¼SE¼, SE¼SE¼	80
W36	Sec. 28, NE¼NE¼	40
W36 and W39A	Sec. 27, NW¼NW¼, SW¼SE¼	80
W37	Sec. 23, E½SW¼, W½SE¼, NE¼SE¼	200
W38	Sec. 25, SW¼NE¼	40
	T. 8 S., R. 25 E.	
W39B	Sec. 7, NE¼SW¼	40
W41	Sec. 3, SW¼NE¼, NE¼SW¼, N½SE¼	160
	T. 8 S., R. 22 E.	
W700	Sec. 34, NE¼SE¼	40
Grant County		
	T. 7 S., R. 30 E.	
G1	Sec. 24, NE¼NE¼	40
G2 and G3	Sec. 23, SE¼SW¼, NE¼SE¼	80
G4	Sec. 15 NW¼NE¼	40
	T. 7 S., R. 29 E.	
G5	Sec. 14, S1/2NW¼	80
G5	Sec. 15, SE¼NE¼	40
G6	Sec. 17, NW¼SE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
	T. 7 S., R. 27 E.	
G7	Sec. 34, SW¼SE¼	40
	T. 8 S., R. 27 E	
G8	Sec. 14, N½NW¼	80
G8 and G9	Sec. 15, N½NE¼W½SW¼	160
G10	Sec. 25, NW¼SE¼	40
	T. 8 S., R. 28 E.	
G11	Sec. 1, Lots 1 and 2 (39.48 and 39.82 acres, respectively), and S½NE¼, N½SE¼	239
G11	Sec. 31, Lots 9 and 10 (25.06 and 24.85 acres, respectively)	50
G13	Sec. 28, N½SW¼	80
G14	Sec. 27, SW¼SE¼	40
G15	Sec. 26, SW¼SE¼	40
G16 and G18	Sec. 22, NE¼NE¼, SW¼NW¼,NE¼SE¼	120
G17	Sec. 15, E½SW¼	80
G20 and G21	Sec. 14, NW¼NE¼, NE¼NW¼, NW¼SW¼, NW¼SE¼	160
G23	Sec. 24, W½NE¼, NW¼SE¼	120
G24	Sec. 11, S½NE¼,E½SW¼, SE¼	20
G24	Sec. 12, S½N¼, S½NW¼, N½SW¼, SW¼SW¼	280
	T. 8 S., R. 29 E.	
G25	Sec. 7, Lots 7,8,9,16,17,18,19,21 and 22 (48.65, 40, 40, 40, 40, 48.62, 48.58, 40, and 40 acres, respectively).	386
G26	Sec. 18, Lot 15	40
G27B	Sec. 5, SW¼NW¼	40
G28	Sec. 22, SW¼SE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
G28	Sec. 27, NE¼, E½NW¼, NW¼SE¼	280
G29	Sec. 35, NE¼SW¼, NW¼SE¼	80
	T. 8 S., R. 30 E.	
G30	Sec. 20, SW¼NW¼	40
G32	Sec. 12, SE¼NW¼	40
G33	Sec. 14, NE¼NE¼	40
G34	Sec. 24, S½SW¼	80
	T. 8 S., R. 31 E.	
G35	Sec. 30, Lot 1	28
	T. 9 S., R. 32 E.	
G38A	Sec. 5, Lot 1 and 2 (40.98 and 41.06 acres, respectively)	82
G38B	Sec. 4, Lot 1	41
G39	Sec. 22, NW¼SW¼	40
G41	Sec. 27, SE¼SW¼	40
	T. 9 S., R. 31 E	
G45	Sec. 23, NE¼NW¼	40
G46	Sec. 15, SE¼SE¼	40
G47	Sec. 8, NW¼SE	40
	T. 9 S., R. 29 E.	
G48	Sec. 21, SE¼NE¼	40
G49	Sec. 30, N½SE¼	80
G50A and G50B	Sec. 31, Lot 3 (43.39 acres), and SW¼NE¼, E½NW¼	163
	T. 9 S., R. 28 E.	
G51	Sec. 34, NW¼NE, SE¼NE¼	80
G51	Sec. 35, SW¼NW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
G52B	Sec. 27, SW¼NE¼, S½NW¼	120
G52A	Sec. 28, S½NE¼, SE¼NW¼	120
G53	Sec. 22, N½NE¼, SE¼NE¼	120
G54	Sec. 9, SE¼SW¼	40
G55B	Sec. 3, Lot 4	36
G55A	Sec. 4, NW¼SE¼	40
G56	Sec. 5, Lot 8	40
G57	Sec. 6, Lots 1,2,3,6 and 7 (32.26, 31.14, 30.02, 40, and 40 acres, respectively), and SW¼NE¼, NE¼SW¼,NW¼ SE¼	291
G58	Sec. 7, W½NE¼, NE¼NW¼	120
G59	Sec. 8, SW¼SW¼	40
G60	Sec. 17, SW¼NE¼, S½NW¼	120
G61	Sec. 18, SE¼SE¼	40
G62	Sec. 20, SW¼ NE¼, SE¼NW¼, N½SW	160
G63ABC	Sec 30, SE¼NE¼, E½SE¼	120
G63ABC	Sec. 31, Lot 1 (38.68 acres), and N½NE¼, SE¼NE¼, NE¼NW¼, NE¼SE¼	239
G63ABC	Sec. 29, W½, N½SE¼, SW¼SE¼	140
	T. 9 S., R. 27 E.	
G64ABC	Sec. 36, NE¼, NE¼SW¼, E½SE¼	280
G65ABC	Sec. 35, W½NW¼, SW¼, SW¼ SE¼	280
G65ABC	Sec. 34, E½E½	160
G66 and G68B	Sec. 26, NE¼NE¼, SE¼SW¼, NW¼SE¼	120
G68C	Sec. 25, N½NE¼, SW¼NE¼, NE¼NW¼, S½SE¼	240
G68B and G67	Sec. 23, E½SW¼, E½SE¼	160

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres[1]**
G68C	Sec. 24, NW¼NE¼, S½NE¼, NW¼NW¼, S½NW¼, S½	600
G69	Sec. 14, NW¼NE¼	40
G69	Sec. 11, W½SE¼	80
G71	Sec. 3, Lots 2 and 3 (35.05 and 35.35 acres, respectively)	70
	T. 8 S., R. 27 E.	
G72	Sec. 35, SE¼SW¼	40
	T. 9 S., R. 27 E.	
G73	Sec. 4, Lot 1	36
G74 and G75	Sec. 5, Lot 1 (33.34 acres), and SE¼NE¼, W½SW¼	153
G76ABC	Sec. 6, Lots 4,5 and 6 (29.83, 40.37,and 40.62 acres, respectively), and SW¼NE¼, SE¼NW¼, NE¼SW¼, NW¼SE¼	271
	T. 9 S., R. 26 E.	
G76ABC	Sec. 1, Lots 1 and 2 (29.52 and 29.57 acres, respectively), S½NE¼, NE¼SE¼	179
	T. 8 S., R. 27 E.	
G76ABC	Sec. 32, W½SW¼	80
	T. 9 S., R. 27 E.	
G77A	Sec. 18, S½NE¼, N½SE¼, SE¼SE¼	200
G77ABC	Sec. 19, NE¼NE¼, S½NE¼, N½SE¼, SW¼SE¼	240
G77ABC and G78	Sec. 30, NW¼NE¼, SE¼NE¼	80
G79	Sec. 32, N½NE¼, NE¼ NW¼	120
G79	Sec. 29, S½NE¼, N½SE¼, SW¼SE¼	200
	T. 9 S., R. 26 E.	
G80	Sec. 23, NW¼NE¼, S½N½, N½S½, S½SE¼	440

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
G80	Sec. 24, SE¼NW¼, NE¼SW¼, S½SW¼, SW¼SE¼	200
G80	Sec. 26, NE¼	160
G80	Sec. 25, NW¼NE¼, NW¼, N½SW¼, SE¼	440
G83A and G80	Sec. 22, S½NE¼, N½SE¼, SW¼SW¼, SW¼SE¼	240
G83B	Sec. 27, SE¼SE¼	40
G84B	Sec. 15, NE¼NE¼	40
G84E, G81, and G82	Sec. 14, N½NW¼, NW¼SW¼, NE¼SE¼	160
G84A	Sec. 3, Lots 3 and 4 (26.57 and 26.2 acres, respectively), and SW¼NE¼, S½NW¼)	173
G84B	Sec. 11, SW¼NE¼, SW¼	200
G84B	Sec. 10, E½, E½SW¼	400
G84D	Sec. 4, S½SW¼	80
	T. 10 S., R. 27 E.	
G85B	Sec. 3, SE¼NE¼	40
G85A	Sec. 5, NW¼SW¼, NW¼SE¼	80
G86	Sec. 10, W½NW¼, NW¼SW¼, SE¼SW¼	160
G87	Sec. 15, W½NW¼, NW¼SW¼	120
G88	Sec. 22, S½SW¼	80
G89 and G711	Sec. 27, NE¼SE¼, SW¼NW¼, W½SW¼	160
G89	Sec. 26, NW¼SW¼	40
G92	Sec. 1, Lot 1, SE¼NE¼	80
	T. 10 S., R. 28 E.	
G93	Sec. 7, NW¼SW¼, NW¼SE¼	80

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
G94A and G94B	Sec. 16, SW¼NE¼, NW¼SW¼, SW¼SW¼, NW¼SE¼	160
G95	Sec. 22, SE¼SW¼	40
G95	Sec. 27, NW¼NE¼, N½NW¼	120
G96, G97, and G98	Sec. 23, NE¼NW¼, NW¼SW¼, SW¼SW¼	120
G98 and G99	Sec. 26, NW¼NW¼, SE¼SW¼	80
G100	Sec. 33, NW¼SE¼	40
	T. 10 S., R. 29 E.	
G101	Sec. 30, Lot 2	41
G102	Sec. 14, SE¼NE¼	40
G102	Sec. 13, SW¼NW¼	40
G103	**T. 10 S., R. 30 E.** ,Sec. 32, NE¼NW¼	40
G103	**T. 10 S., R. 29 E.**, Sec. 1, SE¼NE¼	40
	T. 10 S., R. 31 E	
G104B	Sec. 30, Lot 2	40
G104A	Sec. 29, W½SW¼	80
G104D	**T. 10 S., R. 30 E.,** Sec. 21, SW¼NW¼	40
	T. 11 S., R. 28 E.	
G109/110	Sec. 6, Lot 1(40.80 acres), SE¼NE¼, SW¼SE¼	121
G111	Sec ,. 5, SE¼SW¼	40
G112	Sec. 18, NE¼NE¼, W½NE¼, NE¼NW¼, W½SE¼, NE¼SE¼	280
G113	Sec. 17, SW¼SW¼	40
G113	Sec. 20, W½NW¼	80
G114	Sec. 21, NE¼NE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
G115/ 117A/118	Sec. 32, N½NE¼, W½SW¼, SE¼SE¼	200
G116B	**T. 12 S., R. 28 E.** ,Sec. 4, Lots 1 and 2 (40.75, 40.65)	81
G116A	**T. 11 S., R. 28 E.** Sec. 33, SE¼SW¼	40
G117B/ 139A	**T. 12 S., R. 28 E.** Sec. 5, Lots 1 and 2 (40.42 and 40.47 acres, respectively), SW¼NE¼, SW¼	281
T. 11 S., R. 28 E		
G118 and G120	Sec. 31, Lots 1 and 2 SE (46.15 and 46.45 acres), NE¼NW¼, NW¼SW¼	333
G119 and G120	Sec. 30, Lot 4 (45.89 acres), SE¼SW¼, SE¼SE¼	126
	T. 11 S., R. 27 E	
G121	Sec. 36, N½NE¼, NE¼NW¼	120
G122/717	Sec. 25, NW¼NW¼, NW¼SW¼, N½SE¼	160
G124	Sec. 23, NE¼	160
G125	Sec. 11, N½NE¼	80
G127A and G127B	Sec. 34, E½NW¼, SW¼SW¼	120
	T. 12 S., R. 27 E.	
G128/130	Sec. 2, Lots 14 (40.65, 40.75, 40.85, and 40.95 acres, respectively), S½N½, SW¼SE¼	363
G128 /131B	Sec. 1, Lot 4 (40.53 acres), NW¼SW¼, S½SW¼, N½SE¼	241
G129	Sec. 3, SE¼SE¼	40
G130	Sec. 11, W½NE¼, E½NW¼	160
G131C	Sec. 12, E½, E½W½, NW¼NW¼	520
G131C	Sec. 13, NE¼, E½NW¼	240
G132	Sec. 15, NE¼NE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
G133B	Sec. 20, All	640
G133A	Sec. 28, W½NE¼, W½	400
G134	Sec. 26, W½, W½E½	400
G135	Sec. 34, All	640
	T. 13 S., R. 27 E	
G136B	Sec. 12, SE¼NE¼, NE¼SE¼	80
G136A	Sec. 2, N½, SE¼	480
	T. 12 S., R. 28 E.	
G137	Sec. 6, Lot 2 and 6 (40.38 and 53.39 acres, respectively), SW¼NE¼, NW¼SW¼, SW¼SE¼	214
G138/ 139A	Sec. 18, Lots 1 and 2 (53.62 and 53.67 acres, respectively), NE¼NE¼, E½NW¼	227
G138/ 139A	Sec. 7, Lot 5 (46.04 acres), E½SE¼	126
G139A	Sec. 8, NW¼NE¼, S½NE¼, W½, N½SE¼	520
	T. 12 S., R. 28 E	
G139B	Sec. 9, E½NE¼, S½NW¼, S½	480
G140	Sec. 15, NE¼	160
G140/141	Sec. 14, SW¼NW¼, W½SW¼, NE¼SE¼	160
G142	Sec. 24, N½NW¼, SE¼NW¼, NW¼SW¼	160
	T. 12 S., R. 29 E.	
G143/144	Sec. 18, Lots 2 and 3 (40.53 and 40.48 acres, respectively), S½SE¼	161
G145	Sec. 17, S½N½, NW¼SE¼	200
G146	Sec. 20, NW¼NE¼	40
G147	Sec. 28, E½NW¼	80

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
	T. 12 S., R. 30 E.	
G149	Sec. 34, W½W½	160
G150A	Sec. 24, SE¼NE¼, W½, W½E½, NE¼SE¼	480
G150A/ 151A	Sec. 25, SE¼NE¼, NW¼NW¼	80
G151B/ 151A	T. 12 S., R. 31 E. Sec. 30, Lots 3 and 4 (39.77 and 39.44 acres, respectively), and SE¼NE¼, SW¼NW¼, E½SW¼, E½SE¼)	319
G152	T. 12 S., R. 31 E. Sec. 26, SW¼SE¼	40
	T. 12 S., R. 32 E.	
G153 and G154	Sec. 30, Lot 4 (40.3 acres), and SW¼NE¼, SE¼NW¼,	120
G155	Sec. 32, NW¼SW¼	40
G156	Sec. 28, N½NE¼, SE¼NE¼	120
G157	T. 12 S., R. 32 E. Sec. 26, NW¼	160
	T. 12 S., R. 33 E.	
G158	Sec. 5, Lot 2	40
GG159	Sec. 16, S½NE¼, E½SE¼	160
G159	Sec. 15, SW¼NW¼	40
G160	Sec. 17, W½E½	160
G162	T. 13 S., R. 35 E. Sec. 30, Lot 2, SE¼NW¼ (39.61 acres)	80
G163	T. 13 S., R. 34 E Sec. 24, SE¼NE¼, SE¼NW¼, N½SE¼	160
	T. 13 S., R. 33 E.	
G164	Sec. 22, NE¼NE¼	40
G165	Sec. 4, Lots 3 and 4 (40.18 and 40.45 acres, respectively), S½NW¼, SW¼	201
G166	Sec. 6, Lot 2 (40.56 acres), and SW¼NE¼, E½SE¼	161

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
	T. 13 S., R. 32 E.	
G167	Sec. 8, SE¼SE¼	40
G168A and G168B	Sec. 20, NE¼, N½SW¼	240
	T. 13 S., R. 31 E.	
G169B	Sec. 4, Lots 1 and 2 (40.24 and 40.03 acres, respectively), and S½NE¼, NW¼SW¼, SE¼	360
G170	Sec. 28, S½SW¼	80
G171	Sec. 6, Lot 1	40
G172	Sec. 4, SE¼SE¼	40
G173 and G174	Sec. 14, NW¼NE¼, NE¼NW¼, S½SE¼	160
G175	Sec. 6, Lots 1 4 (40.12, 40.37, 40.62, and 40.87 acres, respectively)	162
G176	Sec. 18, Lots 1 and 2, NE¼, E½NW¼ SE¼ (41.34, 41.41)	483
	T. 13 S., R. 29 E	
G177 and G178	Sec. 24, NE¼, W½NW¼	240
G179	Sec. 28, W½SW¼	80
G180	Sec. 8, All	640
G181	Sec. 6, Lots 3,4,5,6 and 7 (40.37, 40.12, 40.36, 40.59, and 40.81 acres, respectively), and SE¼NW¼	242
	T. 13 S., R. 28 E.	
G182	Sec. 14, N½	320
G183B	Sec. 24, NE¼SE¼, SW¼SE¼	80
G184	Sec. 22, S½SE¼	80
G185	Sec. 34, NW¼NE¼	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
G186	Sec. 33, W½NE¼, SE¼NE¼, E½NW¼, NE¼SE¼	240
G187 and G188	Sec. 32, SE¼NW¼, E½SE¼	120
G189	Sec. 31, Lot 4	57
G190 and G191	Sec. 29, SW¼SW¼, SW¼SE¼	80
G193	Sec. 20, N½NE¼, SW¼NE¼, N½NW¼, SW¼NW¼	240
G193 and G194	Sec. 19, Lot 1 (54.87 acres), and E½NE¼	135
G193	Sec. 17, SE¼	160
G194	Sec. 18, Lots 3 and 4 (54.78 and 54.93 acres, respectively)	110
G197	T. 14 S., R. 29 E. Sec. 11, E½NE¼, N½S½	240
	T. 14 S., R. 30 E	
G198	Sec. 7, E½NE¼	80
G200	Sec. 3, NW¼SW¼	40
G201	Sec. 11, NW¼SE¼	40
	T.14 S., R 31 E .	
G202	Sec. 5, Lots 3 and 4 (34.69 and 34.56 acres, respectively), NW¼SW¼	109
G203	Sec. 3, Lots 3 and 4 (33.74, 34.12)	68
G204	Sec. 30, SW¼SE¼	40
G205	Sec. 31, SE¼NW¼, E½SW¼	120
G206	Sec. 29, SW¼NW¼, NW¼SW¼	80
G206 and G207	Sec. 32, SW¼NE¼, SE¼NW¼, SW¼SW¼, NW¼SE¼	160
G209A and G209B	Sec. 28, SE¼NW¼, SE¼	200

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
G210	Sec. 27, E½SE¼	80
G210B	Sec. 15, NE¼NW¼, SE¼NE¼, NW¼SW¼, S½SW¼, W½SE¼	280
G210B1 and G210B3	Sec. 22, W½NE¼, SE¼NE¼, N½NW¼, SE¼SW¼, NW¼SE¼	280
G210B4, G210B5, and G210B6	Sec. 21, N½NE¼, NE¼NW¼, NW¼SW¼, SE¼SW¼, SW¼SE¼	240
G211	Sec. 34, NE¼SE¼	40
G212	Sec. 23, NE¼SE¼	40
	T. 14 S., R. 32 E.	
G213	Sec. 9, SE¼NW¼, NW¼SW¼	80
G214	Sec. 4, NW¼SE¼	40
G215	Sec. 10, NW¼NE¼	40
G216 and G218	Sec. 1, Lots 1, 3 and 4 (34.13, 33.85, and 33.71 acres, respectively), and NW¼SW¼, NE¼SE¼	182
G216	Sec. 2, Lots 1 and 2 (33.55 and 33.37 acres, respectively), and SE¼	227
G217	Sec. 12, SW¼NW¼	40
	T. 14 S., R. 33 E.	
G219	Sec. 8, N½NW¼, SW¼NW¼	120
G219	Sec. 7, E½NE¼, NE¼SE¼	120
	T. 17 S., R. 26 E.	
G222	Sec. 17, NW¼NE¼	40
G223	Sec. 22, SE¼NW¼	40
G224	Sec. 20, NW¼SW¼	40
G225	Sec. 30, SE¼NE¼, NE¼SE¼, S½SE¼	160

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres[1]**
G225 and G226	Sec. 29, SE¼NE¼, W½NW¼, N½SE¼	200
	T. 18 S., R. 26 E.	
G229	Sec. 4, NW¼SW¼	40
G230B	Sec. 17, W½NW¼	80
G230A and G230B	Sec. 8, NW¼SW¼, SW¼SW¼	80
G231	Sec. 9, S½S½	160
G231	Sec. 10, S½SW¼	80
G232	Sec. 21, SW¼NE¼	40
G233	Sec. 19, NE¼SE¼	40
G234 and G235	Sec. 28, NW¼NE¼, E½NW¼, S½SE¼	200
G236B	Sec. 25, N½NW¼	80
G236A	Sec. 26, SE¼NE¼	40
G237	Sec. 13, N½NW¼	80
G237	Sec. 12, SW¼NE¼, S½NW¼, E½SW¼, NW¼SE¼	240
G238	Sec. 1, S½SE¼	80
G239B	Sec. 2, Lots 1 and 2, S½NE¼, W½SE¼, (40.62, 40.50)	241
G239A	T. 17 S., R. 26 E. Sec. 35, SE¼	160
G240C	T. 17 S., R. 27 E. Sec. 31, Lots 1-4 (40.38, 40.33, 40.28, 40.23)	161
G240A	T. 17 S., R. 26 E. Sec. 25, NE¼SE¼, S½SE¼	120
G240B	T. 17 S., R. 27 E. Sec. 30, Lots 2, 3 and 4 (40.33, 40.36, 40.39)	122

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
G242, G241A, and G241B	T. 17 S., R. 26 E. Sec. 13, NE¼NE¼, SE¼NW¼, W½SE¼	160
	T. 17 S., R. 27 E.	
G243	Sec. 18, NW¼SW¼	40
G244 and G245	Sec. 29, E½NE¼, SW¼SE¼	120
G246B and G247	Sec. 33, N½, W½SW¼, SE¼	560
G246	Sec. 28, E½, SE¼SW¼	360
G246	Sec. 21, W½E½	160
	T. 18 S., R. 27 E.	
G247A	Sec. 3, Lots 3 and 4, S½NW¼, SW¼ (43.62, 43.54)	207
G247A	Sec. 4, Lots 1- 4, NE¼SE¼ (43.40, 43.23, 43.05, 42.88)	213
G247, G251, and G252	Sec. 10, N½NW¼, SW¼NW¼, SW¼SW¼, NW¼SE¼	80
	T. 17 S., R. 27 E.	
G247	Sec. 27, SW¼	160
G247	Sec. 34, W½, S½SE¼	400
	T. 18 S., R. 27 E.	
G248 and G250A	Sec. 5, Lots 3 and 4, S½SE¼ (42.23, 42.01)	164
G249	Sec. 6, SE¼SE¼	40
G250A	Sec. 8, NE¼, N½S½	320
G250B and G247A	Sec. 9, SE¼NE¼, SW¼NW¼	80
G253	Sec. 2, SW¼SW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
G254	Sec. 11, S½NE¼	80
G254	Sec. 12, S½N½	160
	T. 18 S., R. 28 E.	
G256	Sec. 6, Lots 1,2,3,4,5,6 and 7, S½NE¼, SE¼NW¼, NW¼SW¼ (61.24, 62.39, 63.54, 68.30, 41.71, 41.19, 40.66)	539
G257	Sec. 5, Lot 1, S½N½, NW¼SW¼ (57.86)	258
G260 and G262	Sec. 9, S½NW¼, NW¼SW¼, E½SE¼	200
G260	Sec. 7, S½NE¼, SE¼	240
G260	Sec. 8, NW¼NE¼, S½NE¼, NW¼, N½S½, SW¼SW¼	480
G261	Sec. 20, N½NW¼, SW¼NW¼	120
G261	Sec. 17, NE¼, NE¼NW¼, S½NW¼, SW¼, N½SE¼, SW¼SE¼	560
G262	Sec. 10, W½SW¼, SE¼SW¼	120
G263	Sec. 15, S½NW¼, N½SW¼	160
G265B	Sec. 22, S½SW¼	80
G265B and G264	Sec. 21, NE¼NE¼, SE¼SE¼	80
G265B	Sec. 28, SW¼NE¼, W½SE¼, SE¼SE¼	160
G265B	Sec. 27, All	640
G266	Sec. 33, E½E½	160
G267 and G268	Sec. 23, NW¼NW¼, SE¼	200
G267	Sec. 24, NW¼SW¼, S½SW¼	120
G268	Sec. 14, SW¼SW¼	40
G269 and G270	Sec. 11, SE¼NE¼, S½SW¼, NE¼SE¼	160

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
G271	T. 18 S., R. 29 E. ,Sec. 7, Lots 3 and 4 (33.82 and 33.67 acres, respectively)	67
G271	T. 18 S., R. 28 E. Sec. 12, SE¼	160
	T. 18 S., R. 29 E.	
G272	Sec. 18, NW¼SW¼	40
G273	Sec. 19, Lot 3	35
G274	T. 18 S., R. 28 E. Sec. 2, Lot 1	45
G274	T. 17 S., R. 28 E. Sec. 35, E½SE¼	80
	T. 17 S., R. 29 E.	
G275	Sec. 19, SE¼NE¼	40
G276	Sec. 6, Lot 3	39
	T. 13 S., R. 31 E.	
G279 and G284A	Sec. 26, Lots 1,2,3,4,7,9,10 (2.5, 2.5, 2.5, 1.25, 1.25, 2.5, and 2.5 acres, respectively), and SW¼SW¼, W½SE¼SW¼)	135
G281 and G284A	Sec. 35, W½W½, W½E½W½	240
G282, G283, and G298	Sec. 36, NE¼NW¼NE, S½NW¼NE¼, W½W½NW¼, W½NW¼SW¼, S½NE¼SW¼, SE¼SW¼	130
	T. 17 S., R. 27 E.	
G286	Sec. 11, NW¼NW¼	40
G286 and G431	Sec. 10, W½NE¼, NE¼NE¼, S½SE¼	200
G289	Sec. 12, N½SE¼, SW¼SE¼	120
G289	Sec. 13, NW¼NE¼	40
G292	Sec. 6, Lot 10	42

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
	T. 11 S., R. 27 E.	
G420	Sec. 9, Lot 1 (42.98 acres), and SE¼SE¼	83
G422/126	Sec. 22, N½NE¼, S½NW¼	160
G422	Sec. 21, NE¼, SW¼NW¼, N½SE¼	280
G423	Sec. 27, NW¼NW¼	40
G424	T. 12 S., R. 27 E. Sec. 16, NW¼NW¼	40
G426	T. 14 S., R. 33 E., Sec. 9, W½SW¼, NE¼SW¼, NW¼SE¼	160
	T. 17 S., R. 27 E.	
G428	Sec. 17, NW¼NE¼	40
G428	Sec. 8, N½NE¼, SW¼NE¼, W½SE¼,	200
G429 and G430	Sec. 9, NW¼NW¼, E½SW, W½SE, SE¼SE¼, N½NE, SE¼NE¼	360
G431 and G433	Sec. 15, E½NE¼, NW¼NW¼, S½NW¼, SW¼, NE¼SE¼	400
G432	Sec. 2, S½S½, NW¼SW¼	200
G432	T. 7 S., R. 27 E. Sec. 1, NW¼SW¼	40
G701	T. 8 S., R. 27 E. Sec. 29, N½SW¼	80
G702 and G19	T. 8 S., R. 28 E. Sec. 23, N½NW¼, SE¼NW¼, SW¼SW¼	160
G703	T. 8 S., R. 29 E. Sec. 9, SW¼NW¼	40
	T. 8 S., R. 31 E.	
G704	Sec 23, NE¼NW¼	40
G705 and G37	Sec. 32, NE¼NW¼, NW¼SW¼	80
G706	T. 9 S., R. 26 E. Sec. 19, NE¼SE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres[1]**
G707, G708, and G44	T. 9 S., R. 32 E. Sec. 18, NE¼NE¼, SW¼NE¼, SE¼SW¼, SW¼SE¼	160
	T. 10 S., R. 27 E.	
G709 and G90	Sec. 14, NE¼NE¼, NW¼SE¼	80
G710	Sec. 21, W½NW¼	80
G712 and G713	Sec. 28, NW¼NE¼, SE¼NE¼	80
G714 and G715	Sec. 34, W½NE, NE¼NW¼, SE¼SW¼	240
G716	T. 10 S., R. 31 E. Sec. 21, NW¼NE¼	40
	T. 11 S., R. 29 E.	
G718	Sec. 29, SW¼, SW¼SE¼	200
G718	Sec. 32, NW¼NE¼, NE¼NW¼	80
G719/720	Sec. 30, Lot 3 (42.31 acres), NW¼NE¼	82
G721/ 139A	T. 12 S., R. 28 E. , Sec. 17, NW¼NE¼, NW¼NW¼	80
G722	T. 12 S., R. 29 E. , Sec. 34, W½SW¼	80
G723, G724, and G161A	T. 12 S., R. 33 E. , Sec. 20, SE¼NE¼, SW¼NW¼, SW¼SW¼	120
G725 and G192	T. 13 S., R. 28 E., Sec. 30, Lots 3 and 4 (54.62 and 54.97 acres, respectively), SE¼NW¼, NE¼SE¼	190
G726	T. 13 S., R. 31 E. Sec. 22, NW¼NE¼	40
G727	T.14 S., R 13 E . Sec. 2, SE¼SE¼	40
G728	T. 16 S., R. 30 E., Sec. 1, Lot 2	10
G729	T. 17 S., R. 27 E. Sec. 26, NW¼SW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
	T. 17 S., R. 26 E.	
G730 and G225	Sec. 31, W½NE¼, NW¼SE¼, SE¼SE¼	160
G730, G227, and G228	Sec. 32, NW¼NE¼, SW¼SW¼, NW¼SE¼	120
G730	T. 18 S., R. 26 E. Sec. 5, Lot 4	40
Morrow County		
M1	T. 6 S., R. 25 E., Sec. 7, NE¼SE¼ T. 6 S., R. 25 E., Sec. 8, NW¼SW¼	80
M2	T. 6 S., R. 25 E., Sec. 6, Lot 4	23
M3	T. 6 S., R. 25 E., Sec. 9, NE¼SW¼	40
M4	T. 6 S., R. 25 E., Sec. 10, E½SW¼, S½SE¼	160
M5	T. 6 S., R. 25 E., Sec. 1, Lot 1	24
M6	T. 6 S., R. 25 E., Sec. 19, Lot 3	39
M7	T. 5 S., R. 25 E., Sec. 31, Lot 4	40
M8	T. 5 S., R. 26 E., Sec. 11, SW¼SW¼	40
M9	T. 5 S., R. 27 E., Sec. 17, NE¼SE¼	40
M10	T. 5 S., R. 27 E., Sec. 3, NW¼SW¼	40
M11	T. 4 S., R. 28 E., Sec.15, NE¼NE¼	40
M12	T. 4 S., R. 28 E., Sec.1, SE¼NE¼, N½SE¼	120
M13	T. 4 S., R. 29 E., Sec. 6, SE¼SW¼, SW¼SE¼	80
M15	T. 4 S., R. 29 E., Sec. 3, NE¼SE¼	40
M16	T. 4 S., R. 29 E., Sec. 3, Lots 1 to 4, inclusive T. 4 S., R. 29 E., Sec. 4, Lots 1 and 2	94
M24	T. 2 S., R. 29 E., Sec. 1, NW¼SE¼	40
M26	T. 2 N., R. 27 E., Sec. 6, unnamed lot in the NE¼NW¼	40
M27	T. 5 N., R. 27 E., Sec. 20, southern portion of NW¼SW¼ not included within Corps of Engineers withdrawal.	16
M28	T. 4 N., R. 26 E., Sec. 8, S½NE¼, N½SW¼	160

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
M29	T. 4 N., R. 23 E., Sec. 22, 200feet wide diagonal strip, portion of SW¼NE¼ and SE¼NW¼ within railroad right-of-way.	13
M30	T. 3 S., R. 23 E., Sec. 31; Lots 2, 3 and 4; E½SW¼, W½SE¼, SE¼SE¼ T. 3 S., R. 23 E., Sec. 32, SW¼SW¼	394
M31	T. 6 S., R. 25 E., Sec. 15, N½NE¼, NE¼NW¼	120
M32	T. 4 N., R. 24 E., Sec. 18, 200-feet wide diagonal strip, portion of Lot 5 within railroad right-of-way.	8
Umatilla County		
UM4	T. 5 S., R. 31 E., Sec. 18, Lots 2 and 3	79
UM5	T. 5 S., R. 31 E., Sec. 6, SE¼NE¼	40
UM6	T. 4 S., R. 31 E., Sec. 19, Lot 4 T. 4 S., R. 31 E., Sec. 30, Lots 1, 2 and 3, SE¼NW¼, E½SW¼	273
UM7	T. 4 S., R. 30 E., Sec. 13, N½NW¼	80
UM8	T. 4 S., R. 30 E., Sec. 9, SW¼SE¼	40
UM9	T. 4 S., R. 30 E., Sec. 10, SE¼SW¼	40
UM10	T. 4 S., R. 30 E., Sec. 10, NW¼SE¼	40
UM11	T. 4 S., R. 30 E., Sec. 2, Lot 4	17
UM12	T. 4 S., R. 30 E., Sec. 2, Lot 1	15
UM13	T. 4 S., R. 30 E., Sec. 1, Lot 2	13
UM14	T. 3 S., R. 30½ E., Sec. 35, Lots 1 to 4, inclusive	92
UM15	T. 3 S., R. 30½ E., Sec. 26, Lot 3	23
UM16	T. 3 S., R. 30 E., Sec. 24, SW¼SE¼	40
UM17	T. 1 S., R. 30 E., Sec. 8, SW¼NE¼	40
UM18	T. 2 N., R. 28 E., Sec. 28, E½E½	160
UM19	T. 2 N., R. 28 E., Sec. 10, NW¼SW¼	40
UM20	T. 3 N., R. 27 E., Sec. 24, SW¼	160
UM21	T. 3 N., R. 27 E., Sec. 12, S½SE¼	80

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
UM22	T. 3 N., R. 27 E., Sec. 2, SE¼SE¼	40
UM23	T. 5 N., R. 28 E., Sec. 32, W½NE¼	80
UM24	T. 5 N., R. 28 E., Sec. 34, S½SW¼NW¼	20
UM25	T. 5 N., R. 28 E., Sec. 28, SE¼SE¼	40
UM26	T. 5 N., R. 28 E., Sec. 28, NE¼NE¼	40
UM27	T. 5 N., R. 28 E., Sec. 22, Lot 1, E½SW¼SW¼	38
UM28	T. 5 N., R. 28 E., Sec. 26, W½NW¼SW¼, SW¼SW¼, N½SE¼SW¼	80
UM29	T. 5 N., R. 29 E., Sec. 20, SW¼	160
UM30	T. 5 N., R. 29 E., Sec. 34, NE¼NE¼	40
UM31	T. 5 N., R. 30 E., Sec. 10, S½	320
UM32	T. 5 N., R. 30 E., Sec. 13, SE¼	160
UM33	T. 5 N., R. 30 E., Sec. 11, E½W½	160
UM34	T. 5 N., R. 30 E., Sec. 4, SE¼NE¼	40
UM35	T. 6 N., R. 30 E., Sec. 35, SE¼	160
UM36	T. 5 N., R. 31 E., Sec. 8, SW¼SE¼	40
UM37	T. 5 N., R. 31 E., Sec. 2, Lot 3	35
UM38	T. 6 N., R. 32 E., Sec. 15, Lot 4	40
UM39	T. 3 N., R. 36 E., Sec. 14, E½SW¼, NW¼SE¼ T. 3 N., R. 36 E., Sec. 23, NE¼NW¼	160
UM40	T. 5 N., R. 37 E., Sec. 23, S½SE¼	80
UM41	T. 5 N., R. 37 E., Sec. 27, NE¼NE¼	40
UM42	T. 5 N., R. 37 E., Sec. 27, NE¼SE¼	40
UM43	T. 5 N., R. 38 E., Sec. 19, W½NE¼, E½NW¼	160
UM44	T. 5 N., R. 38 E., Sec. 19, NE¼SE¼	40
UM45	T. 5 N., R. 38 E., Sec. 17, Lots 1, 8 and 9, NE¼SE¼	134
UM46	T. 5 N., R. 38 E., Sec. 8, SE¼SE¼	40
UM47	T. 3 S., R. 31 E., Sec. 17, S½SW¼	80
UM48	T. 3 S., R. 32 E., Sec. 2, W½SE¼	80

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
UM49	T. 4 S., R. 31 E., Sec. 12, SW¼NW¼	40
UM50	T. 4 S., R. 31 E., Sec. 12, SW¼NE¼	40
UM51	T. 4 S., R. 31 E., Sec. 12, SW¼SE¼	40
UM52	T. 4 S., R. 31 E., Sec. 23, SE¼SE¼	40
UM53	T. 4 S., R. 31 E., Sec. 28, W½NE¼	80
UM54	T. 4 S., R. 31 E., Sec. 26, SW¼SE¼	40
UM55	T. 4 S., R. 32 E., Sec. 18, N½NE¼	80
UM57	T. 5 S., R. 31 E., Sec. 17, N½SE¼	80
UM58	T. 5 S., R. 32 E., Sec. 23, NE¼SE¼	40
UM59	T. 5 S., R. 33 E., Sec. 19, SE¼NW¼	40
UM59A	T. 5 S., R. 33 E., Sec. 30, SE¼NW¼	40
UM60	T. 5 S., R. 33 E., Sec. 21, SW¼NW¼	40
UM61	T. 6 S., R. 33 E., Sec. 6, Lot 5	33
UM62	T. 1 S., R. 35 E., Sec. 25, Lot 2	40
UM63	T. 4 N., R. 28 E., Sec. 14, N½S½SE¼SW¼ (portion located north of railroad)	6
UM64	T. 2 S., R. 31 E., Sec. 12, NE¼NE¼	40
UM66	T. 4 N., R. 27 E., Sec. 26, Lot 11, N½SW¼SE¼	28
UM67	T. 5 N., R. 28 E., Sec. 28, NE¼SE¼	40
UM68	T. 5 N., R. 29 E., Sec. 22, SW¼NW¼	40
UM69	T. 4 N., R. 37 E., Sec. 5, Lot 4	48
UM70	T. 5 S., R. 31 E., Sec. 21, SW¼NW¼	40
UM72	T. 2 S., R. 33 E., Sec. 13, Lot 6	15
UM74	T. 2 S., R. 34 E., Sec. 13, Lot 5	5

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
UM75	T. 5 N., R. 31 E., Sec. 3, Lot 4, S½NW¼; T. 5 N., R. 31 E., Sec. 4, Lots 1 to 4, inclusive, SE¼NE¼, SW¼NW¼, W½SW¼ T. 5 N., R. 31 E., Sec. 5, Lots 1 and 2, S½NE¼, SE¼ T. 5 N., R. 31 E., Sec. 6, Lots 1, 2, 6 and 7, S½NE¼,E½SW¼, SE¼ T. 5 N., R. 31 E., Sec. 7, Lot 1, NW¼NE¼ T. 5 N., R. 31 E., Sec. 8, NE¼NW¼ T. 6 N., R. 31 E., Sec. 27, SE¼SW¼,W½SE¼ T. 6 N., R. 31 E., Sec. 28, Lots 14 and 15 T. 6 N., R. 31 E., Sec. 29, Lot 16 T. 6 N., R. 31 E., Sec. 31, Lots 2, 3 and 4, SE¼NW¼, E½SW¼, SE¼ T. 6 N., R. 31 E., Sec. 32, Lots 1, 2, 6, 7, 9, 12, 13 and 16 to 20, inclusive T. 6 N., R. 31 E., Sec. 33 Lots 1, 2, and 7 to 10, inclusive T. 6 N., R. 31 E., Sec. 34, NW¼NE¼, N½NW¼, SW¼NW¼	2,798
UM76	T. 6 N., R. 31 E., Sec. 17, Lot 3	37
UM77	T. 2 S., R. 33 E. Sec. 4, Lot 2 Sec. 5, Lots 10, 11 and 13 Sec. 9, Lots 5 and 8 Sec. 11, Lot 3	70
UM78	T. 2 S., R. 33 E., Sec. 19, Lot 4	40
UM79	T. 2 S., R. 33 E., Sec. 19, Lot 16	34
UM80	T. 6 S., R. 33 E., Sec. 5, Lot 4, SW¼NW¼	69
Union County		
UN1	T. 1 N., R. 38 E., Sec. 32, S½NW¼, SW¼	240
UN2	T. 2 S., R. 36 E., Sec. 4, S½NW¼	80
UN3	T. 2 S., R. 36 E., Sec. 18, SE¼SW¼ T. 2 S., R. 36 E., Sec. 19, W½NE¼, NE¼NW¼	160
UN4	T. 2 S., R. 36 E., Sec. 24, NW¼SW¼	40
UN5	T. 2 S., R. 37 E., Sec. 27, SE¼NW¼	40
UN6	T. 2 S., R. 37 E., Sec. 35, SW¼SW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
UN7	T. 3 S., R. 37 E., Sec. 7, SW¼NE¼, N½SE¼ T. 3 S., R. 37 E., Sec. 8, NW¼SW¼	160
UN8	T. 3 S., R. 36 E., Sec. 21, SE¼SW¼	40
UN9	T. 3 S., R. 35 E., Sec. 23, SW¼NE¼, N½SE¼	120
UN10	T. 3 S., R. 35 E., Sec. 26, NE¼SE¼	40
UN11	T. 4 S., R. 35 E., Sec. 4, NE¼SW¼	40
UN12	T. 4 S., R. 35 E., Sec. 17, SE¼SE¼	40
UN14	T. 6 S., R. 35 E., Sec. 1, E½SW¼	80
	T. 5 S., R. 38 E.	
UN15	Sec. 31, SW¼	160
UN16	Sec. 2, NW¼SW¼; Sec. 3, E½SE¼	120
UN17	Sec. 3, W½SW¼	80
UN18	Sec. 10, W½W½	160
UN19	Sec. 11, S½NW¼, SW¼	240
UN20	Sec. 11, SE¼SE¼; Sec. 12, SW¼SW¼	80
UN21	T. 3 S., R. 40 E., Sec. 25, W½SW¼	80
UN22	T. 3 S., R. 40 E., Sec. 35, NE¼SE¼	40
UN23	T. 4 S., R. 40 E., Sec. 1, Lot 3	44
UN24	T. 3 S., R. 41 E., Sec. 31, NE¼NE¼	40
UN25	T. 3 S., R. 41 E., Sec. 32, Lots 3 and 4, N½SW¼	156
UN26	T. 4 S., R. 41 E., Sec. 5, Lots 1, 2 and 3	120
UN27	T. 4 S., R. 41 E., Sec. 9, E½NW¼	80
UN28	T. 4 S., R. 41 E., Sec. 33, SW¼SE¼	40
UN29	T. 4 S., R. 39 E., Sec. 29, N½NW¼	80
	T. 5 S., R. 39 E.	
UN30	Sec. 1, NE¼SW¼	40
UN31	Sec. 3, NE¼SE¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
UN32	Sec. 14, NE¼NE	40
UN33	Sec. 14, W½SE¼	80
UN34	T. 5 S., R. 40 E., Sec.15, NW¼NW¼	40
UN35	T. 5 S., R. 40 E., Sec.15, NE¼SW¼	40
UN36	T. 5 S., R. 40 E., Sec. 22, SW¼NE¼	40
	T. 5 S., R. 41 E.	
UN37	Sec. 10, NW¼NE¼	40
UN38	Sec. 15, SW¼NE¼	40
UN39	Sec. 30, SE¼SW¼	40
UN41	Sec. 32, S½SE¼	80
UN42	Sec. 33, NE¼SW¼	40
UN45	T. 6 S., R. 40 E., Sec. 3, SW¼NE¼	40
UN46	T. 6 S., R. 40 E., Sec. 13, SW¼NE¼	40
UN48	T. 6 S., R. 40 E., Sec. 24, SW¼SE¼ T. 6 S., R. 40 E., Sec. 25, NE¼NW	80
	T. 6 S., R. 41 E.	
UN49	Sec. 5, Lot 3	41
UN50	Sec. 20, SE¼NW¼	40
UN51	Sec. 21, E½NW¼	80
UN52	Sec. 28, NE¼NW¼	40
UN53	Sec. 30, Lot 3	41
UN54	Sec. 33, SW¼SW¼	40
UN55	Sec. 34, NW¼NE¼	40
UN56	Sec. 36; Lots 1, 2 and 3; NW¼NE¼	81
UN57	Sec. 36, Lots 48, inclusive	43
UN58	T. 6 S., R. 42 E., Sec. 31, Lot 3	40
UN59	T. 6 S., R. 42 E., Sec. 30, W½NE¼	80
UN61	T. 2 S., R. 36 E., Sec. 5, SW¼SW¼	40

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
UN62	T. 5 S., R. 38 E., Sec. 14, SW¼SW¼ T. 5 S., R. 38 E., Sec. 15, S½N½, NW¼SW¼, E½SE¼	320
UN63	T. 3 S., R. 35 E., Sec. 25, SE¼SW¼	40
UN64	T. 3 S., R. 35 E., Sec. 24, NW¼NW¼	40
UN65	T. 6 S., R. 38 E., Sec. 18, NE¼NW¼	40
UN66	T. 6 S., R. 40 E., Sec. 17, NW¼NE¼	40
UN68	T. 2 N., R. 39 E., Sec. 6, lot 3	40
UN69	T. 2 N., R. 41 E., Sec. 31, NW¼NE¼	40
UN70	T. 6 S., R. 40 E., Sec. 26, NE¼NW¼	40
UN71	T. 2 S., R. 35 E., Sec. 1, SW¼NE¼	40
Baker County		
	T. 13 S., R. 36 E.	
B1	Sec. 15, SW¼NE¼	40
	T. 12 S., R. 37 E.	
B2	Sec. 13, SE¼NW¼, NE¼SW¼	80
B3	Sec. 14, SE¼NE¼	40
B4	Sec. 14, E½NW¼	80
	T. 13 S., R. 37 E.	
B5	Sec. 5, S½NE¼	80
B6	Sec. 9, NE¼NE¼	40
B8	Sec. 27, NW¼SW¼	40
B9	Sec. 30, SE¼NW¼	40
	T. 14 S., R. 37 E.	
B10	Sec. 6, Lot 3	38
	T. 12 S., R. 38 E.	
B11	Sec. 2, Lot 2	40
B12	Sec. 2, SW¼SE¼.	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
B13	Sec. 4, Lot 3	41
B15	Sec. 19, E½SE¼ and Sec. 20, N½SW¼, SW¼SW¼, NW¼SE¼	240
	T. 14 S., R. 38 E.	
B16	Sec. 4, Lot 3, SE¼NW¼	80
	T. 7 S., R. 39 E.	
B17	Sec. 26, W½SE¼, SE¼SE¼ Sec. 35, N½NE¼	200
	T. 10 S., R. 39 E.	
B18	Sec. 13, W½NE¼, SE¼NW¼	120
B19	Sec. 13, W½SW¼, SE¼SW¼ Sec. 14, SE¼SE¼	160
B20	Sec. 33, SW¼SW¼	40
	T. 11 S., R. 39 E.	
B21	Sec. 2, Lots 1 and 2	70
B22	Sec. 31, Lot 3	33
B23	T. 12 S., R. 39 E., Sec. 5, Lot 1, SE¼NE¼	72
B24	T. 7 S., R. 40 E., Sec. 26, NE¼NE¼	40
	T. 9 S., R. 40 E.	
B25	Sec. 26, S½NE¼, N½NW¼, SE¼NW¼, N½SW¼,W½SE¼ Sec. 27, E½NE¼,SW¼NE¼,NE¼SE¼ Sec. 35, NW¼NE¼	400
B27	Sec. 34, SW¼NW¼, W½SW¼, SE¼SW¼	160
B28	T. 9 S., R. 37 E. , Sec. 29, Lots 10 and 17	14
	T. 12 S., R. 40 E.	
B29	Sec. 28, NW¼SW¼	40
B30	Sec. 29, SE¼SW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
	T. 13 S., R. 40 E.	
B31	Sec. 2, Lot 3	40
B32	Sec. 9, SE¼NW¼, NE¼SW¼, SE¼ Sec. 10, N½SW¼.	320
	T. 7 S., R. 41 E.	
B33	Sec. 1, NW¼SW¼	40
B34	Sec. 4, Lots 3 and 4, SE¼NW¼, NE¼SW¼	161
B35	T. 9 S., R. 37 E., Sec. 29, Lot 14	9
	T. 7 S., R. 41 E.	
B36	Sec. 12, SW¼SW¼	40
B37	Sec. 14, SE¼NE¼	40
B38	Sec. 23, SE¼NW¼	40
B39	Sec. 26, SE¼NE¼, E½SW¼, SE¼ Sec. 35, N½NE¼, SE¼NE¼, NE¼NW¼	440
	T. 10 S., R. 40 E.	
B40	Sec. 1, that part of Lot 1 in the S½NE¼; and that part of Lot 2 in the N½NE¼, N½SE¼	240
B41	Sec. 3, that part of Lot 1 in the SW¼NW¼; and that part of Lot 2 in the NW¼NW¼, NW¼SW¼	120
B42	T. 11 S., R. 40 E. , Sec. 6, SE¼NE¼	40
B43	T. 7 S., R. 41 E., Sec. 7, Lots 1 and 2	74
	T. 8 S., R. 41 E.	
B44	Sec. 7, Lot 4	39
B45	Sec. 9, W½SE¼	80
B46	Sec. 19, N½NE¼	80
B47	Sec. 28, N½SE¼	80

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
	T. 10 S., R. 41 E.	
B48	Sec. 9, NE¼NE¼	40
B49	Sec. 10, SE¼SE¼	40
B50	Sec. 12, S½NE¼	80
B51	Sec. 12, SE¼SE¼ Sec. 13, NE¼NE¼ Sec. 18, Lot 1	120
B52	Sec. 14, E½NW¼, NE¼SW¼	120
B53	Sec. 15, N½SW¼, SE¼SW¼	120
B54	Sec. 18, N½SE¼	80
B55	Sec. 21, NE¼NE¼ Sec. 22, NW¼NW¼	80
B56	Sec. 21, SE¼NW¼	40
B57	T. 8 S., R. 42 E., Sec. 24, E½E½ T. 8 S., R. 43 E., Sec. 19, Lots 1, 2 and 3, W½NE¼, E½N¼, NE¼SW¼, NW¼SE¼	541
B58	T. 9 S., R. 42 E., Sec. 25, S½S½	160
B59	T. 9 S., R. 37 E., Sec. 29, Lot 15	10
B60	T. 10 S., R. 42 E., Sec. 6, SW¼SE¼	40
B61	T. 9 S., R. 37 E., Sec. 29, Lot 12	2
	T. 10 S., R. 42 E.	
B62	Sec. 17, SE¼SW¼	40
B64	Sec. 18, SE¼SW¼	40
B65	Sec. 18, E½SE¼	80
	T. 11 S., R. 42 E.	
B66	Sec. 3, NW¼SW¼	40
B67	Sec. 4, S½NE¼	80
B68	Sec. 8, SW¼NW¼	40

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres[1]**
	T. 11 S., R. 37 E.	
B71	Sec. 19, Lot 2	32
B72	Sec. 20, SE¼SE¼	40
	T. 9 S., R. 43 E.	
B73	Sec. 15, SW¼SE¼ Sec. 22, NW¼NE¼	80
B74	Sec. 30, Lot 3	38
B75	Sec. 31, N½NE¼	80
B76	Sec. 32, SW¼NW¼, NW¼SW¼	80
	T. 10 S., R. 43 E.	
B77	Sec. 3, SE¼SE¼	40
B78	Sec. 4, N½SW¼, SE¼SW¼ Sec. 5, SW¼NE¼ N½SE¼	240
B79	Sec. 5, Lot 3	40
B80	T. 11 S., R. 37 E., Sec. 21, N½NW¼	80
	T. 10 S., R. 43 E.	
B81	Sec. 5, SW¼SW¼	40
B82	Sec. 11, E½SW¼	80
B83	Sec. 23, SE¼NE¼, N½SE¼ Sec. 24, NW¼SW¼	160
B84	Sec. 26, E½NE¼	80
	T. 11 S., R. 43 E.	
B85	Sec. 23, N½SW¼, NW¼SE¼	120
B86	Sec. 31, SW¼SE¼	40
B87	Sec. 35, NE¼SW¼	40
B88	Sec. 36, N½	320

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
	T. 11 S., R. 37 E.	
B90	Sec. 21, SW¼SE¼	40
B91	Sec. 27, N½NE¼	80
B92	Sec. 29, NW¼NW¼	40
	T. 8 S., R. 44 E.	
B93	Sec. 13, SE¼SE¼	40
B94	Sec. 15, Lot 3	28
B95	Sec. 21, Lots 1 and 2, Ollie Woodman Lode	26
B96	T. 9 S., R. 44 E., Sec. 26, NE¼SE¼, S½SE¼	120
B97	T. 11 S., R. 37 E., Sec. 31, Lot 1	33
B98	T. 8 S., R. 44 E., Sec. 22, Lot 3	11
	T. 9 S., R. 44 E.	
B99	Sec. 23, SE¼NW¼	40
B100	Sec. 23, S½SE¼ Sec. 26, NW¼NE¼	120
B101	T. 9 S., R. 44 E., Sec. 24, SE¼E¼ T. 9 S., R. 45 E., Sec. 19, Lots 2, 3, and 4, E½SW¼	238
	T. 9 S., R. 44 E.	
B102	Sec. 27, NW¼NW¼	40
B103	Sec. 27, NW¼SE¼	40
B104	T. 9 S., R. 44 E., Sec. 31, E½SW¼, NW¼SE¼ T. 10 S., R. 44 E., Sec. 6, Lots 3 and 4	197
B105	T. 9 S., R. 44 E., Sec. 34, SW¼SE¼	40
	T. 10 S., R. 44 E.	
B106	Sec. 2, SW¼SW¼	40
B107	Sec. 3, NW¼SE¼	40
B108	T. 11 S., R. 37 E., Sec. 31, Lot 4	33

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
B109	T. 10 S., R. 44 E., Sec. 18, Lots 2 and 3	77
	T. 11 S., R. 44 E.	
B110	Sec. 19, Lot 1	10
B111	Sec. 33, SE¼SW¼	40
B112	T. 12 S., R. 44 E., Sec. 31, Lots 2, 3 and 4	131
B113	T. 11 S., R. 37 E., Sec. 31, NE¼SE¼	40
B114	T. 9 S., R. 45 E., Sec. 30, Lot 3	39
B116	T. 13 S., R. 45 E., Sec. 30, Lot 3	40
B117	T. 14 S., R. 45 E., Sec. 19, SW¼NE¼, W½SE¼ Sec. 30, N½NW¼NE¼	140
B118	T. 7 S., R. 46 E., Sec. 25, N½NE¼, SE¼NE¼, E½SE¼ Sec. 36, E½NE¼, NE¼SE¼ T. 7 S., R. 47 E., Sec. 30, Lots 1 to 4, inclusive Sec. 31, Lots 1 and 2	569
B119	T. 8 S., R. 46 E., Sec. 1, Lot 2	40
B121	T. 11 S., R. 46 E., Sec. 7, Lots 1 to 4, inclusive, E½SW¼, N½SE	321
B122	T. 11 S., R. 37 E., Sec. 34, SE¼NE¼	40
	T. 7 S., R. 47 E	
B123	Sec. 31, NE¼NE¼	40
B124	Sec. 31, S½SW¼NE¼	20
B125	T. 11 S., R. 37 E., Sec. 35, SE¼SE¼	40
	T. 11 S., R. 38 E.	
B127	Sec. 26, NW¼NW¼	40
B128	Sec. 27, N½NW¼, SE¼NW¼	120
B129	Sec. 33, NW¼NE¼	40
B130	Sec. 34, SW¼SW¼	40
B131	Sec. 36, SW¼	160

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
	T. 12 S., R. 36 E.	
B132	Sec. 22, SE¼SE¼	40
B133	Sec. 23, SE¼NW¼	40
B134	Sec. 24, SW¼SW¼	40
B135	Sec. 25, E½SW¼	80
	T. 12 S., R. 37 E.	
B136	Sec. 7, Lot 3	34
B137	Sec. 7, N½SE¼, SE¼SE¼	120
B138	Sec. 8, NE¼NE¼	40
B139	Sec. 12, NE¼SE¼	40
B140	Sec. 19, SW¼NE¼	40
B141	Sec. 21, SW¼NE¼	40
B142	Sec. 21, NE¼NW¼	40
B143	Sec. 31, Lots 2 and 3	68
B144	**T. 12 S., R. 38 E.** Sec. 1, S½NE¼, E½SW¼, N½SE¼ Sec. 12, SE¼ Sec. 13, NE¼,SW¼, N½SE¼, SE¼SE¼ Sec. 14, S½N½, N½S½ Sec. 15, S½NE¼, E½NW¼, N½SE¼, SE¼SE¼ Sec. 22, E½NE¼, NE¼SE¼ Sec. 24, W½ **T. 12 S., R. 39 E.** Sec. 6, Lots 4 to 7, inclusive, E½SW¼; Sec. 7, Lots 1 to 4, inclusive, E½W½, SE¼.	2,534
	T. 12 S., R. 38 E.	
B145	Sec. 10, SW¼SW¼	40
B146	Sec. 34, S½SE¼	80

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres[1]**
	T. 13 S., R. 37 E.	
B147	Sec. 5, SW¼SW¼; Sec. 6, SE¼SW¼, S½SE¼.	160
B148	Sec. 15, SE¼SW¼, SW¼SE¼, N½SE¼ (portion south of U.S.Highway 26) Sec. 22, NE¼NW¼	160
B149	Sec. 21, SW¼NE¼, SE¼SW¼, SE¼; Sec. 28, N½NE¼	320
B150	Sec. 22, SW¼NW¼	40
B154	Sec. 23, NE¼ (portion south of U.S.Highway 26), E½NW¼, NW¼NW¼ Sec. 14, S½SW¼ (portion south of U.S.Highway 26)	280
	T. 13 S., R. 39 E.	
B158	Sec. 10, E½NW¼, SW¼NW¼	120
B159	Sec. 12, NE¼SE¼	40
B160	T. 13 S., R. 40 E., Sec. 7, Lot 2	39
B161	T. 12 S., R. 39 E., Sec. 35, SE¼SE¼ Sec. 36, SW¼NW¼, W½SW¼	160
	T. 12 S., R. 40 E.	
B162	Sec. 31, Lot 1	39
B163	Sec. 32, SW¼NW¼	40
	T. 13 S., R. 40 E.	
B164	Sec. 5, Lot 3	41
B165	Sec. 5, SE¼NE¼	40
B166	Sec. 5, SW¼SW¼	40
B168	Sec. 11, SE¼NW¼	40
B169	Sec. 12, SE¼SW¼, SW¼SE¼	80
B171	T. 13 S., R. 41 E., Sec. 11, SW¼NW¼	40
B173	T. 13 S., R. 40 E., Sec. 6, Lots 2, 3 and 4	118

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
B175	T. 13 S., R. 38 E., Sec. 34, NE¼SE¼.	40
	T. 11 S., R. 40 E.	
B176	Sec. 5, SE¼SW¼.	40
B177	Sec. 8, N½NE¼ Sec. 9, N½NW¼	160
B178	Sec. 7, E½NE¼ Sec. 8, W½NW, N½SW¼	240
B179	Sec. 6, SE¼SW¼ Sec. 7, E½NW¼, E½SW¼, SW¼SE¼	240
	T. 10 S., R. 39 E.	
B180	Sec. 10, W½NW¼	80
B181	Sec. 15, SW¼NE¼	40
B182	Sec. 14, NW¼NW¼	40
B183	Sec. 14, SE¼NW¼, NE¼SW¼	80
B184	T. 9 S., R. 39 E., Sec. 34, SE¼NW¼, NE¼SW¼	80
B185	T. 7 S., R. 39 E., Sec. 26, SW¼NW¼, W½SW¼ Sec. 27, SE¼NE¼	160
B186	T. 7 S., R. 39 E., Sec. 27, NW¼NE¼	40
B187	T. 7 S., R. 40 E., Sec. 6, Lot 7 and 10	14
B188	T. 7 S., R. 40 E., Sec. 20, NE¼SE¼ Sec. 21, W½NW¼, NW¼SW¼	160
B189	T. 6 S., R. 40 E., Sec. 18, Lot 6	16
B190	T. 6 S., R. 40 E., Sec. 8, SE¼SW¼ Sec. 17, NE¼NW¼. (UN66NW¼NE¼)	80
B191	T. 7 S., R. 38 E., Sec. 8, NE¼SE¼	40
B192	T. 7 S., R. 38 E., Sec. 30, NW¼NE¼	40
B193	T. 7 S., R. 38 E., Sec. 31, Lot 4	36
B194	T. 8 S., R. 38 E., Sec. 5, Lots 2 and 3, SE¼NW¼	118

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	Approx. Acres[1]
B195	T. 8 S., R. 38 E., Sec. 14, Lot 1	40
B196	T. 8 S., R. 38 E., Sec. 14, Lot 3	7
B197	T. 8 S., R. 38 E., Sec. 28, W½SW¼	80
B198	T. 8 S., R. 38 E., Sec. 27, E½SE¼	80
B199	T. 8 S., R. 38 E., Sec. 35, SW¼NE¼	40
B200	T. 10 S., R. 41 E., Sec. 3, SW¼NW¼	40
B201	T. 9 S., R. 41 E., Sec. 21, E½NE¼NE¼	20
B202	T. 9 S., R. 41 E., Sec. 24, NW¼SW¼	40
B203	T. 9 S., R. 42 E., Sec. 30, Lot 3, SW¼NE¼, NE¼SW¼, W½SE¼ Sec. 31, W½NE¼, SE¼NE¼	320
B204	T. 10 S., R. 41 E., Sec. 25, SE¼SE¼ Sec. 36, E½NE¼ T. 10 S., R. 42 E., Sec. 30, Lot 4, SE¼SE¼ Sec. 31, Lot 1, NE¼, NE¼NW¼ N½SE¼ Sec. 32, SW¼NE¼, S½NW¼, N½SW¼, SE¼SW¼, SE¼ Sec. 33, W½SW¼ T. 11 S., R. 42 E., Sec. 4, Lot 4 Sec. 5, Lot 1, SE¼½NE¼	1,120
	T. 8 S., R. 41 E.	
B205	Sec. 33, NE¼NE¼; Sec. 34, NW¼NW¼	80
B206	Sec. 29, SW¼SE¼	40
B207	T. 7 S., R. 41 E., Sec. 10, W½SE¼, SE¼SE¼	160
B209	T. 7 S., R. 42 E., Sec. 5, Lots 1, 2 and 3	118
	T. 12 S., R. 42 E.	
B210	Sec. 10, NE¼SW¼, NW¼SE¼	80
B211	Sec. 11, SW¼SE¼	40
B212	Sec. 1, Lot 3	35

Parcel	**Legal Description** (All Willamette Meridian, Oregon)	**Approx. Acres**[1]
	T. 12 S., R. 43 E.	
B213	Sec. 7, SW¼NE¼, NW¼SE¼	80
B214	Sec. 7, NE¼NE¼ Sec. 8, NW¼NW¼	80
B215	Sec. 5, SW¼SE¼	40
	T. 11 S., R. 43 E.	
B217	Sec. 26, S½NW¼	80
B218	Sec. 14, S½ Sec. 15, S½ Sec. 16, E½SE¼ Sec. 22, N½NE¼, NE¼NW¼ Sec. 23, N½NW¼	920
B219	T. 12 S., R. 43 E., Sec. 24, NE¼SE¼. T. 12 S., R. 44 E., Sec. 19, Lot 3, NE¼SW¼.	123
B220	T. 13 S., R. 44 E., Sec. 23, SW¼NW¼, W½SW¼.	120
B221	T. 13 S., R. 44 E., Sec. 26, NE¼NW¼.	40
B224	T. 14 S., R. 44 E. Sec. 11, W½E½ Sec. 14, W½E½	320
B225	T. 12 S., R. 44 E., Sec. 15, E½E½	160
B226	T. 10 S., R. 44 E., Sec. 15, E½NE¼	80
B227	T. 10 S., R. 44 E., Sec. 15, NE¼NW¼	40
B228	T. 10 S., R. 44 E., Sec. 11, SW¼NW¼	40
B229	T. 9 S., R. 44 E., Sec. 3, SW¼NE¼, NW¼SE¼	80
B230	T. 8 S., R. 44 E., Sec. 34, E½SE¼ Sec. 35, SE¼NW¼, SW¼ T. 9 S., R. 44 E., Sec. 2, Lot 4	319
	T. 8 S., R. 44 E.	
B231	Sec. 15, Lot 8	18
B235	Sec. 16, Lot 11	22

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
B236	Sec. 16, Lots 12 and 13, American Lode, Tiger Lily Lode	80
B237	Sec. 8, NE¼SE¼	40
B238	Sec. 19, Lot 13	41
B239	Sec. 19, Lots 16, 17, 19, 20 and 21 Sec. 30, Lots 7 and 8	81
B240	T. 8 S., R. 44 E., Sec. 13, NE¼NE¼ T. 8 S., R. 45 E., Sec. 18, Lot 1, NE¼NW¼	119
B241	T. 8 S., R. 45 E., Sec. 18, S½NE¼, N½SE¼, SW¼SE¼.	200
B242	T. 9 S., R. 45 E., Sec. 4, SW¼NE¼.	40
	T. 7 S., R. 46 E.	
B243	Sec. 27, S½ Sec. 34, N½, E½SE¼ Sec. 35, SW¼SW¼.	760
B244	Sec. 26, W½SW¼NW¼	20
	T. 8 S., R. 47 E.	
B246	Sec. 2, Lots 3 and 4, S½NW¼, SW¼ Sec. 3, Lots 1and 2, S½NE¼, N½SE¼, SE¼SE¼	608
B248	Sec. 15, E½NW¼, NE¼SW¼	120
B249	T. 9 S., R. 46 E. Sec. 1, S½SW¼, SW¼SE¼ Sec. 12, NE¼, E½NW T. 9 S., R. 47 E. Sec. 6, S½SE¼ and Sec. 7, Lots 1, 2, 3 and 4, NE¼, W½NW¼, E½SW¼, NW¼SE¼.	955
B250	T. 8 S., R. 47 E., Sec. 17, NE¼, N½SE¼	240
B251	T. 11 S., R. 39 E., Sec. 11, E½SE¼SW¼	20
	T. 9 S., R. 47 E.	
B252	Sec. 8, SE¼SW¼, and Sec. 17, NE¼NW¼	80

Parcel	Legal Description (All Willamette Meridian, Oregon)	Approx. Acres[1]
B253	Sec. 8, SE¼SE¼	40
B254	Sec. 9, NE¼SW¼	40

Summary of Potential Disposal Parcels

Total Acres of Potential Disposal Land Identified To Date, by County

Grant County	46,752
Wheeler County	3,066
Morrow County	1,690
Umatilla County	7,602
Union County	4,606
Baker County	26,048
TOTAL	89,764 acres

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[1] Acres are estimates (rounded up/down to nearest acre) and may be more or less.

Appendix A

Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

Sherman County

T. 2 S., R.18 E.
Sec.13: Portion of SW¼SW¼
Sec. 22: Lots 1, 2, and 3; S½NE¼, SE¼NW¼, N½SE¼
Sec. 24: Portion of NW¼SW¼

Morrow County

T. 5 S. , R. 33 E.
Sec. 31: S½SE, E½E½SW¼

T. 6 S., R. 28 E.
Sec. 36: SW¼SW¼, E½W½,E½

T. 6 S., R. 29 E.
Sec. 31: Lots 2-4, 7, 9-11, 14, and 15; SE¼,S½NE¼,NW¼
Sec. 32: SW¼
Sec. 36: All

Umatilla County

T. 6 S., R. 30 E.
Sec. 6: Lots 1-3, SE¼, SE¼NW¼, E½SW¼, S12NE¼
Sec. 7: All
Sec. 15: S½
Sec. 16: NW¼,S½
Sec. 17: All
Sec. 18: All
Sec. 19: All, except Lot 1
Sec. 20: All
Sec. 21: All
Sec. 22: All
Sec. 23: All
Sec. 24: NE¼, NE¼NW¼, S½NW¼, S½
Sec. 25: N½, N½SW¼,NW¼SE¼
Sec. 26: NW¼NW¼,E½, E½SW¼,SW¼SW¼
Sec. 27: NE¼, SW¼NW¼, NW¼SW¼,SW¼SW¼, E½SW¼, SE¼
Sec. 28: S½NE¼, SE¼, SE¼NW¼, SW¼
Sec. 29: N½
Sec. 30: Lots 1-4, E½W½, E½

Appendix A
Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

T. 6 S., R.30 E.
Sec. 31: Lots 1-4, E½W½, E½
Sec. 32: N½, N½S½, SWSW, S½SE¼
Sec. 33: S½, NW¼, N½NE¼, SE¼NE¼
Sec. 34: E½, NW¼SW¼, S½SW¼
Sec. 35: NW¼, W½NE¼, SE¼NE¼, N½SE¼, SE¼SW¼, SW¼SE¼
Sec. 36: N½, SE¼

T. 6 S., R. 31 E.
Sec. 18: NE¼NW¼, SW¼NE¼, E½SW¼, SW¼SE¼
Sec. 19: NW¼,N½SW¼,SW¼NE¼,NW¼SE¼
Sec. 29: S½SE¼
Sec. 30: SE¼SW¼,SW¼SE¼
Sec. 31: SW¼NW¼, E½W½,W½E½,SE¼NE¼, E½SE¼
Sec. 32: NW¼NE¼,SE¼NW¼,S½NE¼,N½S½,SE¼SW¼,S½SE¼
Sec. 33: W½SW¼,SE¼SW¼

T. 6 S., R. 33 E.
Sec. 3: Lots 1-4, S½NE¼, S½NW¼
Sec. 4: Lots 1-3, SW¼NE¼
Sec. 5: Lots 1 and 2, SW¼NE¼

Grant County

Appendix A
Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

T. 7 S., R. 27 E.
Sec. 9: W½NE¼, SE¼NE¼, E½NW¼, SW¼NW¼, SESE
Sec. 10: S½NW¼, SW¼SW¼
Sec. 13: NE¼, NE¼NW¼, S½, W½NW¼
Sec. 14: All
Sec. 15: W½, S½SE¼, E½NE¼
Sec. 16: All
Sec. 21: N½, S½SW½, N½SW¼
Sec. 22: N½,N½S½, SE¼SE¼
Sec. 23: N½NE¼, S½N½, S½
Sec. 24: N½, SW¼, NE¼SE¼, S½SE¼
Sec. 25: All
Sec. 26: N½NW¼, SE¼NW¼, SW¼, E½
Sec. 27: All (except an irregular part)
Sec. 28: S½, W½NE¼, NW¼ (excluding easement area and irregular part)
Sec. 29: Irregular parts less than 40 acres each.
Sec. 34: NE¼NW¼, NW¼NE¼ (part)
Sec. 35: N½N½, except irregular part
Sec. 36: N½N½

Appendix A
Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

T. 7 S., R. 28 E.

Sec. 1: Lots 2-4, W½SW¼,SE¼SW¼,W½SE¼,E½NE¼
Sec. 7: SE¼NE¼, E½SE¼, SW¼SE¼
Sec. 8: N½, NE¼SW¼, S½SW¼, SE¼
Sec. 9: All
Sec. 10: W½, W½NE¼, N½SE¼, SE¼SE¼, part of E½NE¼
Sec. 11: SE¼NE¼, SE¼SW¼, S½SE¼, part of W½SW¼
Sec. 12: SW¼NW¼,S½,E½NW¼,S½NE¼,NW¼NE¼
Sec. 13: NE¼, NE¼NW¼, S½NW¼, S½
Sec. 14: NE¼NE¼, S½NE¼, SE¼, W½
Sec. 15: N½, SW¼, N½SE¼, SW¼SE¼
Sec. 16: All
Sec. 17: NE¼NE¼, W½E½, W½NW¼, SW¼
Sec. 18: Lots 1-8, 12, parts of Lots 9-11, E½
Sec. 19: Lots 1 and 6; parts of Lots 2 and 5; E½; Lots 3, 4, and 8-11; and parts of Lot 7.
Sec. 20: All
Sec. 21: All
Sec. 22: E½, NW¼
Sec. 23: All
Sec. 24: All
Sec. 25: N½NE¼, NW¼, NW¼SW¼, S½SW¼, SW¼SE¼
Sec. 26: S½NE¼, SW¼NW¼, S½, N½N½
Sec. 27: E½
Sec. 28: N½N½
Sec. 29: N½, NW¼SW¼, E½SW¼, SE¼
Sec. 30: E½NE¼, NE¼SE¼, part of the NW¼SE¼, W½, Lots 1-11, NE, N½SE, part of W½E½
Sec. 31: Lot 10, W½ Lot 11, Lot 3
Sec. 33: S½SE¼
Sec. 34: N½SW¼, N½NE¼
Sec. 35: N½NE¼, NW¼NW¼

Appendix A
Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

T. 7 S., R. 29 E.
Sec. 1: N½N½, SW¼NW¼, NW¼SW¼, SE¼SW¼, SE¼
Sec. 2: N½, NE¼SE¼, S½SE¼
Sec. 3: E½NW¼, E½
Sec. 4: S½SE¼
Sec. 6: Lots 2-25, SW¼NE¼
Sec. 7: Lots 3-10, 16-20
Sec. 8: S½N½, N½S½, SW¼SE¼

T. 7 S., R. 29 E.
Sec. 9: NE¼, N½NW¼, SE¼NW¼, NW¼SW¼
Sec. 10: N½, NE¼SW¼, NE¼SE¼
Sec. 11: N½, N½S½
Sec. 12: NE¼NW¼
Sec. 19: Lots 7-9, 17-21

T. 7 S., R .30 E.
Sec. 1: N½NE¼, NE¼NW¼, S½N½, N½S½, SW¼SW¼
Sec. 2: NW¼, S½, SE¼NE¼
Sec. 3: S½NE¼, NE¼SW¼, S½SW¼, SE¼
Sec. 4: NW¼, S½NE¼, S½SW¼, SE¼
Sec. 5: NW¼, SW¼NE¼, E½NE¼, SW¼, W½SE¼
Sec. 6: All
Sec. 7: N½NW¼, NE¼
Sec. 8: W½NW¼
Sec. 9: W½NW¼, N½NE¼, SE¼NE¼
Sec. 10: N½
Sec. 11: N½
Sec. 12: W½NW1¼, SE¼NW¼

T. 8 S., R. 28 E.
Sec. 4: E½NE¼
Sec. 5: SW¼SW¼
Sec. 6: All
Sec. 7: NE¼

T. 9 S.,R. 26 E.
Sec. 20: SW¼, N½SE¼, SE¼SE¼
Sec. 28: SW¼NW¼, W½SW¼
Sec. 29: NW¼NW¼, S½NE¼, NW¼, S½
Sec. 34: S½SW¼

Appendix A
Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

T. 10 S., R. 26 E.
Sec. 3: W½
Sec. 4: SW¼SE¼, S½S½
Sec. 5: SW¼, S½SE¼
Sec. 6: SW¼SE¼, E½SE¼
Sec. 7: E½E½, NW¼SE¼
Sec. 8: W½, S½NE¼
Sec. 9: N½NE¼, E½NW¼, SW¼NW¼
Sec. 10: W½E½, E½W½

T. 10 S., R. 26 E.
Sec. 14: S½NE¼, N½SE¼, SE¼SE¼
Sec. 15: E½
Sec. 16: All
Sec. 17: W½, SW¼SE¼
Sec. 18: E½E½, SW¼SE¼
Sec. 19: NE¼, E½NW¼, NE¼SW¼, N½SE¼
Sec. 20: NW¼, N½SW¼
Sec. 21: NE¼, E½NW¼
Sec. 22: N½NE¼, SW¼NE¼, NW¼, S½
Sec. 23: E½NE¼, W½NE¼, SE¼NW¼, NE¼SW¼, S½SW¼, SE¼
Sec. 24: W½SW¼, SW¼SE¼
Sec. 25: W½E½, W½NW¼, NW¼SW¼, SE¼SW¼
Sec. 26: N½, N½S½, SE¼SW¼, S½SE¼
Sec. 35: N½NE¼, NE¼NW¼, S½NW¼, NE¼SW¼, S½SW¼, NW¼SE¼, S½SE¼

T. 10 S., R. 27 E.
Sec. 17: E½W½, NW¼NW¼
Sec. 19: NW¼NE¼, S½N½, N½S½, S½SW¼, SW¼SE¼
Sec. 20: E½NW¼
Sec. 28: SW¼NE¼, W½, W½SE¼
Sec. 29: N½, N½SW¼, SE¼SW¼, SE¼
Sec. 30: NE¼NE¼, S½NE¼, N½NW¼, SE¼NW¼, N½N½, SE¼SW¼, SW¼SE¼
Sec. 31: NE¼, SE¼NW¼, S½
Sec. 32: NE¼, E½NW¼, SW¼NW¼, NW¼SW¼, NE¼SE¼, S½SE¼
Sec. 33: W½NE¼, SE¼NE¼, W½, NW¼SE¼

Appendix A
Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

T. 11 S., R. 26 E.
Sec. 1: N½N½, SE¼NE¼, SW¼NW¼, S½
Sec. 2: N½NE¼, E½NW¼, SW¼NW¼, E½SE¼
Sec. 10: NE¼NE¼
Sec. 11: NE¼NE¼
Sec. 12: E½NE¼, W½NW¼

T. 11 S., R. 27 E.
Sec. 4: NE¼NW¼, S½NW¼, NE¼SW¼, SW¼SW¼, NE¼SE¼
Sec. 5: N½N½, SE¼NE¼, S½NW¼, N½SW¼, W½SE¼, SE¼SE¼
Sec. 6: N½N½, SW¼NE¼, SW¼NW¼, N½SW¼, SE¼SW¼, SE¼
Sec. 7: N½NE¼, NW¼, NE¼SW¼, N½SE¼, SE¼SE¼

T. 11 S., R. 27 E.
Sec. 8: N½, N½S½, SW¼SW¼, S½SE¼
Sec. 17: N½NE¼, SE¼NE¼, W½NW¼, S½
Sec. 18: NE¼NE¼
Sec. 20: N½NE¼, NE¼NW¼, S½
Sec. 29: E½, E½NW¼, NE¼SW¼
Sec. 32: E½SE¼

T. 12. S., R. 33 E.
Sec. 1: Portions of Lot 600
Sec. 2: NW¼SW¼, SW¼SW¼, S½NW¼, Lots 3 and 4
Sec. 12: Portions of Lot 600

T. 12 S., R. 34 E.
Sec. 6: Portions of Lot 600
Sec. 7: Portions of Lot 600

T. 14. S., R. 26 E.
Sec. 36: W½, W½E½

Appendix A
Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

T. 16 S., R. 27 E.
Sec. 7: E½W½
Sec. 8: NW¼NE¼, NE¼NW¼, W½NW¼
Sec. 17: SE¼NE¼, N½SE¼, SW¼SE¼
Sec. 19: NE¼SE¼
Sec. 20: SW¼, W½SE¼
Sec. 22: N½SW¼, SE¼SW¼, NE¼SE¼
Sec. 23: SE¼
Sec. 28: NE¼SE¼
Sec. 29: NE¼, E½NW¼, NW¼NW¼, SW¼SE¼
Sec. 30: W½NE¼, N½NW¼, N½NW¼, W½NE¼
Sec. 31: N½NW¼, SW¼NW¼, NW¼SW¼
Sec. 33: S½NE¼, SE¼NW¼, W½SW¼
Sec. 34: N½, N½S½, SE¼SW¼, S½SE¼
Sec. 35: SW¼SW¼
Sec. 36: All

T. 17., R. 27 E.
Sec. 4: W½W½, SE¼SW¼

General Areas of Acquisition Interest - Umatilla County

T. 5 N., R. 37 E. , Secs. 23-25
T. 5 N., R. 38 E., Secs 19, 20, and 30

Powder River below Thief Valley Reservoir
T. 6 S., R. 40 E., Sec. 26, 34, and 35
T. 7 S., R. 40 E., Sec. 2
T. 7 S., R. 41 E., Sec. 27 and 34

Lookout Mountain
T. 9 S., R. 44 E., Secs. 22-28 and 31-36
T. 10 S., R. 44 E., all sections except 28
T. 10 S., R. 45 E., Secs. 7-11, 14-22, and 24-36
T. 10 S., R. 46 E., Secs. 7, 8, 17-20, and 30
T. 11 S., R. 44 E., Secs. 1-17, 21-23, 25-27, 35, and 36
T. 11 S., R. 45 E., Secs. 2-11, 15-22, 28-30, 32, and 33
T. 12 S., R. 44 E., Secs. 1, 2, 11, 12, 14, 22 and 23
T. 12 S., R. 45 E. , Sec. 5

Appendix A
Table A-2. Private Lands Considered for Acquisition in Northeast Oregon Assembled Land Exchange.

Snake River Breaks

T. 5. S. , R. 48 E., Secs. 35 and 36
T. 6 S., R. 48 E., Secs. 1, 3, 4, 10, 11, 15, 20-22, 28, 29, 32, and 33
T. 7 S., R. 47 E., Secs. 25 and 36
T. 7 S., R. 48 E., Secs. 3-10, 16-21, and 28-33
T. 8 S., R. 46 E., Secs. 25, and 34-36
T. 8 S., R. 47 E., Secs. 1-3, 9-23, 26, 29-34, and 36
T. 9 S., R. 45 E., Secs, 19, 25-30, and 34-36
T. 9 S., R. 46 E., Secs. 1, 3, 10-15, 20-23, 25, 26, and 29-32
T. 9 S., R. 47 E., Secs. 3-9, 15-18, and 30
T. 10 S., R. 45 E., Secs. 1 and 2
T. 10 S., R. 46 E., Secs. 5 and 6
T. 11 S., R. 45 E., Secs. 1, 2, 11-15, 22-27, 34, and 36
T. 11 S., R. 46 E., Secs, 5-8, 18, 19, and 30
T. 12 S., R. 45 E., Secs. 1, 4-10, 12, 14-22, 27-30, 32, and 33
T. 13 S., R. 45 E., Secs. 4, 5, 7-9, 16, 17, 19-21, and 29
T. 14 S., R. 45 E., Secs. 5 and 8

Dooley Mountain

T. 11 S., R. 40 E., Secs. 1, 12, 14, 25, 26, and 35
T. 11 S., R. 41 E., Secs. 7-22, 24-26, 28, 31, and 36
T. 11 S., R. 42 E., Secs. 7-11, 16-19, 23-26, 29, 31, and 32
T. 12 S., R. 41 E., Secs. 5, 6, 9, and 10

Pedro Mountain

T. 12 S., R. 42 E., Secs. 13, 14, 22-28, and 32-36
T. 12 S., R. 43 E., Secs. 17-21 and 28-32
T. 13 S., R. 42 E., Secs. 1-5, 8-16, and 22-25
T. 13 S., R. 43 E., Secs. 5-9, 16, 17, 19, 20, and 29-31

Appendix A
Table A-3. Parcels To Be Retained In Public Ownership In Alternative 3.[1]

Parcel By Basin and County	Legal Description	Reason to Retain	
		Large Tree	Columbia Shrub-Steppe
John Day Basin			
Grant County			
G1-5, 8, 9, 16, 22-26,28, and 32-35	See Appendix A, Table A-1a/A-1b or Table A-5 for legal descriptions of Grant County parcels.	X	
G38B, 45-47, 53, and 54		X	
G88-89, 94A, 94B, and 95-98		X	
G101-102, 104A and 104B, 106-108, and 113-114		X	
G125, 150A/B, 153, 157-160, 161A, 161B, 161C, and 163		X	
G189, 197,204-206, 208, 209A, 209B, 210A, and 210B		X	
G231, 236A, 236B, 238, 239A, 239B, 271, and 295		X	
Wheeler County			
W1	T. 6. S., R. 23 E., Sec. 23	X	
W2-10	T. 7 S., R. 22 E., Secs. 12, 14, 20, 23, 25, 26, and 34	X	

Appendix A
Table A-3. Parcels To Be Retained In Public Ownership In Alternative 3.[1]

Parcel By Basin and County	Legal Description	*Reason to Retain*	
		Large Tree	Columbia Shrub-Steppe
W11-22 and 700	T. 8 S., R. 22 E., Secs. 1, 6, 7, 9-11, 19, 24-26, 30, 34, 35, and 40	X	
Morrow County			
M1 and M4	T. 6 S., R. 25 E., Sec. 7, NE¼SE¼; Sec. 8, NW¼SW¼; and Sec. 10	X	
Umatilla County			
UM57	T. 5 S., R. 31 E., Sec. 17, N½SE¼	X	
UM61	T. 6 S., R. 33 E., Sec. 6, Lot 5	X	
UM70	T. 5 S., R. 31 E., Sec. 21, SW¼NW¼	X	
Umatilla Basin			
Morrow County			
M8 and M9	T. 5 S., R. 26 E., Sec. 11, SW¼SW¼ T. 5 S., R. 27 E., Sec. 17, NE¼SE¼	X	
M11	T. 4 S., R. 28 E., Sec.15, NE¼NE¼	X	
M12	T. 4 S., R. 28 E., Sec.1, SE¼NE¼, N½SE¼	X	
M13	T. 4 S., R. 29 E., Sec. 6, SE¼SW¼, SW¼SE¼	X	
M15	T. 4 S., R. 29 E., Sec. 3, NE¼SE¼	X	
M24	T. 2 S., R. 29 E., Sec. 1, NW¼SE¼		X
M27	T. 5 N., R. 27 E., Sec. 20, southern portion of NW¼SW¼ not included within Corps of Engineers withdrawal.		X
M28	T. 4 N., R. 26 E., Sec. 8, S½NE¼, N½SW¼		X
M29	T. 4 N., R. 23 E., Sec. 22, 200-feet wide diagonal strip, portion of SW¼NE¼ and SE¼NW¼ within railroad right-of-way.		X

Appendix A
Table A-3. Parcels To Be Retained In Public Ownership In Alternative 3.[1]

Parcel By Basin and County	Legal Description	Reason to Retain	
		Large Tree	Columbia Shrub-Steppe
M32	T. 4 N., R.24 E., Sec. 18, 200-feet wide diagonal strip, portion of Lot 5 within railroad right-of-way		X
Umatilla County			
UM17-38	T. 1 S., R. 30 E., Sec. 8, SW¼NE¼ T. 2 N., R. 28 E. Sec. 10, NW¼SW¼ Sec. 28, E½E½ T. 3 N., R. 27 E. Sec. 2, SE¼SE¼ Sec. 12, S½SE¼ Sec. 24, SW¼ T. 5 N., R. 28 E. Sec. 22, Lot 1, E½SW¼SW¼ Sec. 26, W½NW¼SW¼, SW¼SW¼, N½SE¼SW¼ Sec. 28, SE¼SE¼, NE¼NE¼ Sec. 32, W½NE¼ Sec. 34, S½SW¼NW¼ T. 5 N., R. 29 E. Sec. 20, SW¼ Sec. 34, NE¼NE¼ T. 5 N., R. 30 E. Sec. 4, SE¼NE¼ Sec. 10, S½ Sec. 11, E½W½ Sec. 13, SE¼		X
UM17-UM38 (continued)	T. 5 N., R. 31 E. Sec. 2, Lot 3 Sec. 8, SW¼SE¼ T. 6 N., R. 30 E., Sec. 35, SE¼ T. 6 N., R. 32 E., Sec. 15, Lot 4		X

Appendix A
Table A-3. Parcels To Be Retained In Public Ownership In Alternative 3.[1]

Parcel By Basin and County	Legal Description	*Reason to Retain*	
		Large Tree	**Columbia Shrub-Steppe**
UM40, 41, and 42	T. 5 N. , R. 37 E., Sec. 23, S½SE¼; Sec. 27, NE¼NE¼; and Sec. 27, NE¼SE¼	X	
UM43, 44, 45, and 46	T. 5 N., R. 38 E., Sec. 19, W½NE¼, E½NW¼ Sec. 19, NE¼ SE¼ Sec. 17, Lots 1, 8 and 9, NE¼ SE¼ Sec. 8, SE¼ SE¼	X	
UM62	T. 1 S., R. 35 E., Sec. 25, Lot 2	X	
UM64	T. 2 S., R. 31 E., Sec. 12, NE¼NE¼		X
UM66	T. 4 N., R. 27 E., Sec. 26, Lot 11, N½SW¼SE¼		X
UM68	T. 5 N., R. 29 E., Sec. 22, SW¼NW¼		X
UM75	T. 5 N., R. 31 E. Sec. 3, Lot 4, S½NW¼ Sec. 4, Lots 1 to 4, inclusive, SE¼NE¼, SW¼NW¼, W½SW¼ Sec. 5, Lots 1 and 2, S½NE¼, SE¼ Sec. 6, Lots 1, 2, 6 and 7, S½NE¼, ½SW¼, SE¼ Sec. 7, Lot 1, NW¼NE¼ Sec. 8, NE¼NW¼ T. 6 N., R. 31 E. Sec. 27, SE¼SW¼,W½SE¼ Sec. 28, Lots 14 and 15 Sec. 29, Lot 16		X

Appendix A
Table A-3. Parcels To Be Retained In Public Ownership In Alternative 3.[1]

Parcel By Basin and County	Legal Description	*Reason to Retain*	
		Large Tree	Columbia Shrub-Steppe
UM75 (continued)	T. 6 N., R. 31 E. Sec. 31, Lots 2, 3 and 4, SE¼NW¼,E½SW¼, SE¼ Sec. 32, Lots 1, 2, 6, 7, 9, 12, 13 and 16 to 20, inclusive Sec. 33 Lots 1, 2, and 7 to 10, inclusive Sec. 34, NW¼NE¼, N½NW¼, SW¼NW¼		X
UM76	T. 6 N., R. 31 E., Sec. 17, Lot 3		X
Grande Ronde Basin			
Union County			
UN3	T. 2 S., R. 36 E., Sec. 18, SE¼SW¼; and Sec. 19, W½NE¼, NE¼NW¼	X	
UN5	T. 2 S., R. 37 E., Sec. 27, SE¼NW¼	X	
UN7	T. 3 S., R. 37 E., Sec. 7, SW¼NE¼, N½SE¼; and Sec. 8, NW¼SW¼	X	
UN26	T. 4 S., R. 41 E., Sec. 5, Lots 1-3	X	
UN27	T. 4 S., R. 41 E., Sec. 9, E½NW¼	X	
UN28	T. 4 S., R. 41 E., Sec. 33, SW¼SE¼	X	
UN39	T. 5 S., R. 41 E., Sec. 30, SE¼SW¼	X	
UN41	T. 5 S., R. 41 E., Sec. 32, S½SE¼	X	
UN42	T. 5 S., R. 41 E., Sec. 33, NE¼SW¼	X	
UN62	T. 5 S., R. 38 E., Sec. 14, SW¼SW¼; and Sec. 15, S½N½, NW¼SW¼, E½SE¼	X	
UN63	T. 3 S., R. 35 E., Sec. 25, SE¼SW¼	X	

Appendix A
Table A-3. Parcels To Be Retained In Public Ownership In Alternative 3.[1]

Parcel By Basin and County	Legal Description	*Reason to Retain*	
		Large Tree	**Columbia Shrub-Steppe**
UN64	T. 3 S., R. 35 E., Sec. 24, NW¼NW¼	X	
UN68	T. 2 N., R. 39 E., Sec. 6, Lot 3	X	
UN71	T. 3. S., R. 35 E., Sec. 1, SW¼NE¼	X	
Powder Basin			
Union County			
UN65	T. 6 S., R. 38 E., Sec. 18, NE¼NW¼	X	
Baker County			
B1	T. 13. S., R. 36 E., Sec. 15, SW¼NE¼	X	
B71	T. 11 S., R. 37 E., Sec. 19, Lot 2	X	
B128	T. 11. S., R. 38 E., Sec. 27, N½NW¼, SE¼NW¼	X	
B129	T. 11 S., R. 38 E., Sec. 33, NW¼NE¼	X	
B130	T. 11 S., R. 38 E., Sec. 34, SW¼SW¼	X	
B138	T. 12. S., R. 37 E., Sec. 8, NE¼NE¼	X	
B144	T. 12 S., R. 38 E. Sec. 1, S½NE¼, E½SW¼, N½SE¼ Sec. 12, SE¼ Sec. 13, NE¼,SW¼, N½SE¼, SE¼SE¼ Sec. 14, S½N½, N½S½ Sec. 15, S½NE¼, E½NW¼, N½SE¼, SE¼SE¼ Sec. 22, E½NE¼, NE¼SE¼ Sec. 24, W½ T. 12 S., R. 39 E. Sec. 6, Lots 4 to 7, inclusive, E½SW¼; Sec. 7, Lots 1 to 4, inclusive, E½W½, SE¼.	X	
B158	T. 13. S., R. 39 E., Sec. 10, E½NW¼, SW¼NW¼	X	

Appendix A
Table A-3. Parcels To Be Retained In Public Ownership In Alternative 3.[1]

Parcel By Basin and County	Legal Description	Reason to Retain	
		Large Tree	Columbia Shrub-Steppe
B160	T. 13 S., R. 40 E., Sec. 7, Lot 2	X	
B162	T. 12 S., R. 40 E., Sec. 31, Lot 1	X	
B177	T. 11 S., R. 40 E., Sec. 8, N½NE¼ Sec. 9, N½NW¼	X	
B178	T. 11 S., R. 40 E., Sec. 7, E½NE¼ Sec. 8, W½NW, N½SW¼	X	
B179	T. 11 S., R. 40 E., Sec. 6, SE¼SW¼ Sec. 7, E½NW¼, E½SW¼, SW¼SE¼	X	
B184	T. 9 S., R. 39 E., Sec. 34, SE¼NW¼, NE¼SW¼	X	
B193	T. 7 S., R. 38 E., Sec. 31, Lot 4	X	
B197	T. 8 S., R. 38 E., Sec. 28, W½SW¼	X	
B198	T. 8 S., R. 38 E., Sec. 27, E½SE¼	X	
B199	T. 8 S., R. 38 E., Sec. 35, SW¼NE¼	X	
B213	T. 12 S., R. 43 E., Sec. 7, SW¼NE¼, NW¼SE¼	X	
B226	T. 10 S., R. 44 E., Sec. 15, E½NE¼	X	
B227	T. 10 S., R. 44 E., Sec. 15, NE¼NW¼	X	
B240	T. 8 S., R. 44 E., Sec. 13, NE¼NE¼ T. 8 S., R. 45 E., Sec. 18, Lot 1, NE¼NW¼	X	

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[1] This table includes units having large trees as listed on Table A-5 (for Phase 1), plus some units in future phases. Additional units will likely be identified for retention as further information is compiled on the specific units.

Appendix A
Table A- 4. Lands Dropped From Exchange Proposal.

Legal Description	Approx. Acres	Reason for Dropping Land From Exchange
T. 1 N., R. 35 E. Secs. 13, 14, and 23	730	Has public access; creates block with National Forest; adjacent to Umatilla Indian Reservation.
T. 3 N. , R. 28 E. Sec. 22, S½	320	Within Oregon Trail ACEC; interpretive wayside.
T. 4 N. , R. 37 E. Secs. 1 and 9-15 T. 4 N. , R. 38 E. Sec. 7	2,045	South Fork Walla Walla ACEC; riparian area; anadromous fish habitat; adjacent to county park.
T. 5 N. , R. 28 E. Sec. 28, SE¼NE¼	40	Site of (closed) Hermiston landfill.
T. 5 N. , R. 31 E. Sec. 22, Lot 2, E½SE¼SW¼, W½SE¼	102	Wetland and wildlife habitat; Power City Wildlife area; Coop agreement with ODFW.
T. 2 S. , R. 36 E. Sec. 5, W½SE¼	80	Within Oregon Trail ACEC.
T. 3 S. , R. 36 E. Sec. 30, SE¼NE¼	40	Withdrawn for Grande Ronde Reclamation Project; not available for exchange.
T. 4 S., R. 32 E. Sec. 36, NE¼NE¼	40	Has old-growth characteristics; adjacent to USFS old-growth reserve.
T. 4 S., R. 35 E. Sec. 23, SW¼NE¼	40	Surrounded by National Forest.
T. 5 S. , R. 31 E. Sec. 21, W½SE¼	80	Adjacent to state scenic wayside; has critical habitat; Bridge Creek Wildlife area is nearby..
T. 5 S., R. 33 E. Sec. 30, Lot 4; Sec 31, Lot 1, SW¼NE¼, E½NW¼, N½SE¼	278	Located on Cable Creek; anadromous fish habitat and riparian value.
T. 5 S., R. 41 E. Sec. 26, NW¼NE¼	40	Surrounded by National Forest.
T. 5 S. , R. 42 E. Sec. 19, Lot 1	50	
T. 5 S. , R. 42 E. Sec. 30, Lot 2	49	
T. 6 S., R. 29 E. Sec. 31, NE¼NE¼	40	Within North Fork John Day acquisition corridor.

Appendix A
Table A- 4. Lands Dropped From Exchange Proposal.

T. 6 S., R. 29 E. Sec. 31, Lots 1 and 8	80	Within North Fork John Day acquisition corridor.
T. 6 S., R. 29 E. Sec. 31, Lots 5, 6, 12, and 13	214	
T. 6 S., R. 29 E. Sec. 33, N½NW¼	80	
T. 6 S., R. 29 E. Sec. 34, W½NE¼, NE¼NW¼	120	
T. 6 S., R. 29 E. Sec. 35, NW¼NW¼.	40	
T. 6 S., R. 29 E. Sec. 35, E½NE¼.	80	
T. 6 S., R. 30 E. Sec. 26, NE¼NW¼,S½NW¼, NW¼SW¼	160	
T: 6 S., R. 30 E. Sec. 32, SE¼SW¼	40	
T. 6 S., R. 30 E. Sec. 33, SW¼NE¼	40	
T. 6 S., R. 30 E. Sec 34, NW¼, NE¼SW¼	200	
T. 6. S., R. 30 E. Secs. 35 and 36 T. 6 S., R. 31 E. Secs. 29, 30, 31, 32, and 36	740	
T. 6 S., R. 31 E. Sec. 15, S½NE¼	80	Bridge Creek State Wildlife Area; BLM-ODFW Coop Agreement; old-growth characteristics.
T. 6 S. , R. 31 E. Sec. 36, S½	320	Bridge Creek State Wildlife Area; BLM-ODFW Coop Agreement; ODFW administrative site; North Fork John Day River with anadromous fish and riparian habitat.
T. 6 S. , R. 33 E. Secs. 3, 4, and 5	990	Located on Cable Creek; anadromous fish habitat and riparian values; creates block with National Forest.
T. 7 S., R. 27 E. Sec. 34, E½NE¼, SW¼NE¼, W½NW¼	200	Blocks into J-V Ranch acquisition area.
T. 7 S., R. 29 E. Sec. 31	80	Anadromous fish habitat (0.25 mile); potential to block acquisition lands into these tracts.
T. 8 S., R. 28 E. Sec. 1: NE¼, N½SE¼	240	Anadromous fish habitat (0.25 mile); potential to block acquisition lands into these tracts.

Appendix A
Table A- 4. Lands Dropped From Exchange Proposal.

T. 8 S, R. 28 E. Sec. 19: SE¼NE¼, NW¼SE¼	80	Potential for blocking into river corridor in later acquisitions.
T. 8 S., R. 29 E. Sec. 6	240	Anadromous fish habitat (0.25 mile); potential to block acquisition lands into these tracts.
T. 8 S., R. 30 E. Sec 17,NE¼NW¼	40	Anadromous fish habitat (0.4 miles); steelhead angler access; dispersed camping site.
T. 8 S., R. 26 E. Sec. 32 T. 9 S., R. 26 E. Secs. 5, 6, and 7	520	Anadromous fish habitat (1.25 miles spawning and rearing); potential acquisition area could block into these tracts.
T. 9 S., R. 26 E. Secs. 19, 27, and 28	280	New acquisition proposals would block into these lands.
T. 9 S., R. 27 E. Sec 3, NW¼SE¼	40	Anadromous fish habitat (0.25 mile) on North Fork John Day River.
T. 9 S., R. 31 E. Sec 15, NW¼	160	Forested parcel blocks into public lands, State and National Forest; public access.
T. 9 S., R. 32 E. Sec 20, NW¼NE¼, NE¼NW¼	80	Anadromous fish habitat (0.5 miles); public access.
T. 9 S., R. 32 E. Sec 27, NW¼NW¼	40	Anadromous fish habitat; public access.
T. 9 S., R. 32 E. Sec 34, S½NE¼, SE¼	200	Blocks well into National Forest; anadromous fish habitat, public access
T. 10 S., R. 27 E. Sec. 6	200	Anadromous fish habitat (0.7 miles).
T. 10 S., R. 31 E. Sec 2, W½W½	160	Blocked into National Forest; anadromous fish habitat (1 mile spawning and rearing); public access.
T. 10 S., R. 31 E. Sec 2, SW¼SE¼	40	Blocks into National Forest on three sides.
T. 12 S., R. 33 E. Sec. 30	240	Threatened wildlife habitat; mature forest stand.
T. 14 S., R. 26 E. Secs 15 and 22	160	Within South Fork retention (Zone 1) corridor; borders National Forest Black Canyon Wilderness.
T. 14 S., R. 29 E. Secs. 6 ,7, and 8	1,200	Blocks into National Forest; unroaded area with mature forest stands; walk-in access.
T. 14 S., R. 32 E. Sec. 11	240	Blocks into National Forest with public access.

Appendix A
Table A- 4. Lands Dropped From Exchange Proposal.

T. 14 S., R. 32 E. Sec. 11	200	Borders National Forest Strawberry Mountain Wilderness; Within Strawberry Wilderness Study Area.
T. 14 S., R. 33 E. Sec. 10	200	Borders National Forest Strawberry Mountain Wilderness; portions within Strawberry Wilderness Study Area (OR2-98); mature forest stand; anadromous fish habitat; bull trout and Westslope cutthroat trout habitat (0.6 miles).
T. 15 S., R. 26 E. Secs. 22, 23, 26, and 35	1,240	Anadromous fish habitat; public access; within Zone 1 retention lands; blocks into National Forest; mature forest stands.
T. 15 S., R. 30 E. Sec. 33, NW¼NW¼	40	Wetland habitat; mature forest stand; public access.
T. 17 S. , R. 28 E. Sec 33 T. 18 S., R. 28 E. Secs. 3 and 4	360	Largely within proposed Wild and Scenic River Corridor; no comparable river front property within Wild and Scenic River corridor offered in trade.
T. 18 S., R. 28 E. Sec. 24, W½SE¼	80	Entirely within proposed Wild and Scenic River Corridor; no comparable river front property within Wild and Scenic river corridor offered in trade.
Total Acres	**13,718**	

Appendix A
Table A-5. Potential Disposal Lands Containing Commercial Timber (Phase 1)

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type[1]	Acres Having Large Tree Component[2]	
				4=	4-
John Day Basin - Northern Grant County					
T. 7 S., R 29 E.					
G5	Secs. 14 and 15	59	P4-/D2-		45
T. 7 S., R. 30 E.					
G4	Sec. 15	33	P4-		33
G2	Sec. 23	40	P4-		36
G3	Sec. 23	40	P4-		28
G1	Sec. 24	32	PD4-		32
T. 8 S., R. 27 E.					
G8	Secs. 14 and 15	44	P4-/P3-		30
G9	Sec. 15	5	P4-		5
T. 8 S., R. 28 E.					
G16	Sec. 22	5	P4-		5
G22	Secs. 22 and 23	4	P4-		4
G23	Sec. 24	5	P4-		5
G24	Secs. 11,12, and 14	32	P4-		32
G25	Sec. 7	59	P4		54
G26	Sec. 18	15	P4-		5
G28	Secs. 22 and 27	40	P4-/P3		31
T. 8 S., R. 30 E.					
G32	Sec. 12	40	P4-		40

Parcel	**Legal Description**	**Acres of Commercial Timber**	**Overstory Timber Type**[1]	**Acres Having Large Tree Component**[2]	
				4=	**4-**
G33	Sec. 14	40	P4-		40
G34	Sec. 24	20	PD4-		10
T. 8 S., R. 31 E.					
G295	Sec. 30	12	P4-		10
G35	Sec. 32	10	PD4-		3
T. 9 S., R. 26 E.					
G83B	Sec. 27	30	PD3-		
T. 9 S., R. 28 E.					
G54	Sec. 9	11	P4-		11
G53	Sec. 22	60	P3-/P4-		12
T. 9 S., R. 31 E.					
G46	Sec. 8	40	PD4-		40
G47	Sec. 15	40	PD4-		40
G45	Sec. 23	28	P4-		28
T. 9 S., R. 32 E.					
G38B	Sec. 4	15	P4		15
G43B	Sec. 18	10	D3-		
T. 10 S., R. 27 E.					
G88	Sec. 22	65	P3-/P4		14
G89	Secs. 26 and 27	79	PD4-/P3		69
T. 10 S., R. 28 E.					
G94A	Sec. 16	37	P4-		37
G94B	Sec. 16	4	P4-		4
G95	Secs. 22 and 27	141	P4-/PDWG4-		141

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type[1]	Acres Having Large Tree Component[2]	
				4=	4-
G96	Sec. 23	28	P4-		28
G97	Sec. 23	63	PD4-PD4-31	31	32
G98	Sec. 26	33	PD4-	33	
G99	Sec. 26	36	PD3-		
T. 10 S., R. 29 E.					
G102	Secs. 13 and 14	80	DWG4-		80
G101	Sec. 30	31	P4-		31
T. 10 S., R. 31 E.					
G104B	Sec. 29	54	PD4-	54	
G104A	Sec. 30	40	PD4-	40	
T. 11 S., R. 27 E.					
G125	Sec. 11	80	PD4- P4-	68	12
T. 11 S., R. 28 E.					
G110	Sec. 6	7	P2-		
G113	Secs. 17 and 20	88	PD4-/PD4	38	50
G114	Sec. 21	32	P4-/P3-		21
T. 11 S., R. 29 E.					
G106	Secs. 29 and 32	4	P4-		4
G107	Sec. 30	16	P4-		16
G108	Sec. 32	9	P4		9
T. 12 S., R. 30 E.					
G150 A	Secs. 24 and 25	165	DP4-/PD4-	62	103
G150B	Sec. 25	49	P4-/D2-	30	
G149	Sec. 34	86	PD3-		

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type[1]	Acres Having Large Tree Component[2]	
				4=	4-
T. 12 S., R. 31 E.					
G151 A	Sec. 30	8			
T. 12 S., R. 32 E.					
G157	Sec. 26	52	P4-		52
G156	Sec. 28	69	PD3-		
G153	Sec. 30	34	PD4-		34
G154	Sec. 30	30	PD3-		
T.12 S., R. 33 E.					
G158	Sec. 5	24	DWG3-/P4		5
G159	Secs. 15 and 16	233	P4-/P4-/3-	36	189
G160	Sec. 17	134	P4-/DWG2-	30	52
G161A	Sec. 20	40	P4-/P3-		40
G161B	Sec. 20	38	P4-/PD3-		33
G161C	Sec. 20	34	P4-/P3		10
G162	Sec. 30	60	D3-/D2-		
T. 13 S., R. 28 E.					
G187	Secs. 29 and 30	13	P3-		
G188	Sec. 29	9	P3-		
G192	Sec. 30	98	PD3-		
G189	Sec. 31	57	PD3-/P4-		10
G191	Sec. 32	34	P3-		
G186	Sec. 33	24	P3-		
T. 13 S., R. 34 E.					
G163	Sec. 24	108	P4-/PD3-		52

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type[1]	Acres Having Large Tree Component [2]	
				4=	4-
T. 14 S., R. 29 E.					
G197	Sec. 11	96	PD4-		96
T. 14. S., R. 31 E.					
G210B	Secs. 15, 21, and 22	498	PD4-/PD3 & 2	28	
G212	Sec. 21	40	P3-		
G210A	Sec. 27	66	P4-/PD3-		39
G209A and 209B	Sec. 28	199	PD4-	114	85
G206	Sec. 29	71	P4-/P4-/P2-	19	23
G204	Sec. 30	20	P3-/P4-		8
G205	Sec. 31	120	PD3-/P4-		53
G207	Sec. 32	36	PD3-		
G208	Sec. 32	93	P4-		93
G211	Sec. 34	31	D3-		
T. 14 S., R. 32 E.					
G218	Sec. 1	7	P3-		
G214	Sec. 4	26	P3-		
G216	Secs. 1 and 2	62	P3-		
G213	Sec. 9	30	PD3-		
G215	Sec. 10	12	P3-		
G217	Sec. 12	22	P3-		
T. 14 S., R. 33 E.					
G219	Sec. 7,8	124	P3-		

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type[1]	Acres Having Large Tree Component[2]	
				4=	4-
T. 17 S., R. 26 E.					
G239A	Sec. 35	108	P4-		108
G240A	Sec. 25	50	P4-	50	
T. 18 S., R. 26 E.					
G235	Sec. 1	13	P3-		
G231	Sec. 2	32	P4-		32
G239B	Secs. 9 and10	84	P4-/P4-	21	63
G237	Sec. 12,13	136	P4-/P3-	61	
G232	Sec. 21	28	P4-	28	
G236B	Sec. 25	53	P4-/PD4-	13	40
G236A	Sec. 26	8	PD4-		8
G238	Sec. 28	18	P4-		18
T. 18 S., R. 27 E.					
G251	Sec. 10	25	P3-		
T. 18 S., R. 28 E.					
G260	Secs. 7 and 8	83	P3-		
T. 18 S., R. 29 E.					
G271	Sec. 7	73	P4-P3-	45	
John Day Basin - Wheeler County					
T. 6 S, R. 23 E.					
W1	Sec. 23	37	P4-/P2-		37
T. 7 S, R. 22 E.					
W2/3	Sec. 12	72	P4/D2		32
W4	Sec. 14	40	P4/D2		38

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type[1]	Acres Having Large Tree Component[2]	
				4=	4-
W5	Sec. 20	36	P4/P2/D		15
W6	Sec. 23	39	P4/D2		27
W7	Sec. 25	38	P4/D3		33
W8/9	Secs. 25 and 26	192	P4/P2		65
W10	Sec. 34	40	P4/D3		40
T. 8 S, R. 21 E.					
W24B	Sec. 14	24	P4/P2		24
T. 8 S., R. 22 E.					
W11	Sec. 1	38	P4/P2		38
W15	Sec. 1	39	P4-/P2/D2		39
W17	Sec. 6	27	P4/P2		13
W17	Sec. 7	68	P4/P2		34
W14	Sec. 9	61	P4/D2/P2	31	21
W12	Sec. 10	31	P4/D2		10
W13	Sec. 11	40	P4/P1		20
W18	Sec. 19	51	P4/P2	38	13
W19	Sec. 24	92	P4/D2		60
W19	Sec. 25	24	P4/D2		24
W21 and 22	Sec. 26	92	P4/P2	40	52
W20	Sec. 30	20	P4/P2	4	
W700	Sec. 34	6	D2		
W21	Sec. 35	8	P4/P2		8
W16	Sec. 40	40	P4/P2		20

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type ^{1}	Acres Having Large Tree Component ^{2}	
				4=	4-
North Fork John Day Basin					
Morrow County					
	T. 6 S., R. 25 E.				
M5	Sec. 1	20	D3-/P2=		
M2	Sec. 6	12	P3/D3		
M1	Secs. 7 and 8	30	P4-/P2-		15
M3	Sec. 9	3	P3-		
M4	Sec. 10	20	P4-/P2		20
M6	Sec. 19	25	P3		
	T. 5 S., R. 25 E.				
M7	Sec. 31	20	P3/P2=		
Umatilla County					
	T. 4 S., R. 30 E.				
UM7	Sec. 13	47	P3/P2		
	T. 4 S., R. 31 E.				
UM49	Sec. 12	21	P2		
UM50	Sec. 12	22	P3=		
UM 51	Sec. 12	24	P3=/D3-		
UM 55	Sec. 18	71	P2=/D2-		
UM6	Sec. 19	107	P2/D2		
UM 52	Sec. 23	30	P3=		
	T. 5 S., R. 31 E.				
UM57	Sec. 17	47	P4-/D3-		47
UM4	Sec. 18	53	P3/D3		

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type[1]	Acres Having Large Tree Component[2]	
				4=	4-
UM70	Sec. 21	28	WL4-/WF3-		28
UM58	Sec. 23	10	P3/D3		
T. 5 S., R. 33 E.					
UM60	Sec. 21	40	WF2=/DF1-		
UM59A	Sec. 30	7	D3		
T. 6 S., R. 33 E.					
UM80	Sec. 5	46	LP2-/WF3-		
UM61	Sec. 6	33	P4-/DWF-		6
Umatilla Basin - Morrow County					
T 4 S., R. 28 E.					
M12	Sec. 1	70	P4-/DWF3		49
M11	Sec. 15	37	P4-/WFD=		21
T. 4 S., R. 29 E.					
M15	Sec. 3	34	P4=/P2	15	
M13	Sec. 6	12	P4-/WF3		12
T. 5 S., R. 26 E.					
M-8	Sec. 11	20	P4D=	20	
T. 5 S., R. 27 E.					
M10	Sec. 3	10	D2=		
M-9	Sec. 17	40	P4=/P2=	34	
Umatilla County					
T. 1 S., R. 35 E.					
UM62	Sec. 25	37	WF4-/03=		37

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type[1]	Acres Having Large Tree Component[2]	
				4=	4-
	T. 3 S., R. 32 E.				
UM48	Sec. 2	74	WF2/P2		
	T. 4 S., R. 30 E.				
UM13	Sec. 1	13	P2/D2		
UM11	Sec. 2	14	P2		
UM9	Sec. 10	30	P2/D2		
UM10	Sec. 10	25	P3/WL2		

Parcel	Legal Description	Acres of Commercial Timber	Overstory Timber Type [1]	Acres Having Large Tree Component [2]	
				4=	4-
Summary					
John Day Basin					
Grant County		5,359		831	2,388
Wheeler County		1,155		113	663
Morrow County		130		0	35
Umatilla County		586		0	81
Basin Total		7,230		944	3,167
Umatilla Basin					
Morrow County		223		69	82
Umatilla County		193		37	0
Basin Total		416		106	82
TOTAL ACRES - PHASE 1		7,646		1,050	3,249

[1] P = Ponderosa Pine
D = Douglas-fir
WF = White fir
LP = Lodgepole pine
WL = Western larch

[2] 4 is a code number used to identify large trees (dbh 21 inches or greater).
4- represents commercial forestlands having large trees, minimally stocked (10-39% crown closure).
4= represents commercial forestlands having large trees, moderately stocked (40-69% crown closure).

Table A-6. Disposal Parcels Presumed for Change In Use After Exchange.
(Note: For the purpose of this analysis, it is presumed that the following parcels would be used for agricultural or other use following transfer into private ownership.)

Parcel Number by Basin and County	Legal Description	Agricultural Use (Approx. Acres)	Industrial, Rural Residential, or Other Use (Approx. Acres)
John Day Basin, Morrow County			
M30	T. 3 S., R. 23 E., Sec. 31; Lots 2, 3 and 4; E½SW¼, W½SE¼, SE¼SE¼ Sec. 32, SW¼SW¼	24	
Umatilla Basin, Morrow County			
M26	T. 2 N., R. 27 E., Sec. 6, unnamed lot in the NE¼NW¼	36	
M27	T. 5 N., R. 27 E., Sec. 20, southern portion of NW¼SW¼ not included within Corps of Engineers withdrawal.	20	
M28	T. 4 N., R. 26 E., Sec. 8, S½NE¼, N½SW¼	129	
Umatilla Basin, Umatilla County			
UM18	T. 2 N., R. 28 E., Sec. 28, E½E½	15	
UM20	T. 3 N., R. 27 E., Sec. 24, SW¼	140	
UM21	T. 3 N., R. 27 E., Sec. 12, S½SE¼	80	
UM22	T. 3 N., R. 27 E., Sec. 2, SE¼SE¼	40	
UM23	T. 5 N., R. 28 E., Sec. 32, W½NE¼	65	
UM24	T. 5 N., R. 28 E., Sec. 34, S½SW¼NW¼		20
UM25	T. 5 N., R. 28 E., Sec. 28, SE¼SE¼		15
UM26	T. 5 N., R. 28 E., Sec. 28, NE¼NE¼		15
UM27	T. 5 N., R. 28 E., Sec. 22, Lot 1, E½SW¼SW¼		35

Parcel Number by Basin and County	Legal Description	Agricultural Use (Approx. Acres)	Industrial, Rural Residential, or Other Use (Approx. Acres)
UM28	T. 5 N., R. 28 E., Sec. 26, W½NW¼SW¼, SW¼SW¼, N½SE¼SW¼		80
UM29	T. 5 N., R. 29 E., Sec. 20, SW¼	160	
UM30	T. 5 N., R. 29 E., Sec. 34, NE¼NE¼	37	
UM32	T. 5 N., R. 30 E., Sec. 13, SE¼	10	
UM36	T. 5 N., R. 31 E., Sec. 8, SW¼SE¼	2	
UM37	T. 5 N., R. 31 E., Sec. 2, Lot 3	23	
UM38	T. 6 N., R. 32 E., Sec. 15, Lot 4	17	
UM63	T. 4 N., R. 28 E., Sec. 14, N½S½SE¼SW¼ (portion located north of railroad)		6
UM64	T. 2 S., R. 31 E., Sec. 12, NE¼NE¼	5	
UM67	T. 5 N., R. 28 E., Sec. 28, NE¼SE¼		15
UM68	T. 5 N., R. 29 E., Sec. 22, SW¼NW¼	20	

Parcel Number by Basin and County	Legal Description	Agricultural Use (Approx. Acres)	Industrial, Rural Residential, or Other Use (Approx. Acres)
UM75	T. 5 N., R. 31 E. Sec. 3, Lot 4, S½NW¼ Sec. 4, Lots 1 to 4, inclusive, SE¼NE¼, SW¼NW¼, W½SW¼ Sec. 5, Lots 1 and 2, S½NE¼, SE¼ Sec. 6, Lots 1, 2, 6 and 7, S½NE¼, E½SW¼, SE¼ Sec. 7, Lot 1, NW¼NE¼ Sec. 8, NE¼NW¼ T. 6 N., R. 31 E. Sec. 27, SE¼SW¼, W½SE¼ Sec. 28, Lots 14 and 15 Sec. 29, Lot 16 Sec. 31, Lots 2, 3 and 4, SE¼NW¼,E½SW¼, SE¼ Sec. 32, Lots 1, 2, 6, 7, 9, 12, 13 and 16 to 20, inclusive Sec. 33 Lots 1, 2, and 7 to 10, inclusive Sec. 34, NW¼NE¼, N½NW¼, SW¼NW¼	157	
Summary			
Total - John Day Basin, Morrow County		**24**	**0**
Total - Umatilla Basin, Morrow County		**185**	**0**
Total - Umatilla Basin, Umatilla County		**771**	**186**
Total - Umatilla Basin (Morrow & Umatilla counties)		**956**	**186**
Total Acres for NOALE Area		**980**	**186**

Table A-7a. Resource Assessment (Umatilla Drainage)

Parcel Number	Total Acres	Land Tenure Zone Existing	Land Tenure Zone Proposed	Legal Access	Existing Rights/Uses	Adjacent Lands	Leased AUMS	Commercial Forest Acres	Erosion Potential	Recreation/ VRM
M8	40	Z-1	Z-3	No	Primitive Road	Private	6	20	Water/S-H	Dispersed Use/VRM Class III
M9	40	Z-1	Z-3	No	None	Private	0	40	Water/M-H	Dispersed Use/VRM Class III
M10	40	Z-1	Z-3	No	None	Private	0	10	Water/M-H	Dispersed Use/VRM Class III
M11	40	Z-1	Z-3	Yes-National Forest	None	National Forest & Private	4	37	Water/S-H	Dispersed Use/VRM Class III
M12	120	Z-1	Z-3	No	Primitive Road	Private	17	79	Water/M-H	Dispersed Use/VRM Class III
M13	80	Z-1	Z-3	No	Primitive Road	Private	0	12	Water/M	Dispersed Use/VRM Class III
M14	93.99	Z-1	Z-3	No	Primitive Road, Stock Driveway, Fence	Private	10		Water/S-H	Dispersed Use/VRM Class III
M15	40	Z-1	Z-3	No	Primitive Road	Private	4	34	Water/S-H	Dispersed Use/VRM Class III
M24	40	Z-2	Z-2	No	None	Private	4		Water/S-H	Dispersed Use/VRM Class III
M26	40	Z-2	Z-2	No	Ag Land Use Plan	Private	0		Water/S-M Wind/M-H	Dispersed Use/VRM Class III
M28	160	Z-2	Z-2	No	Ag Land Use Plan Powerline R/W (2) Irrigation. Canal	Private	0		Water/S Wind/H	Dispersed Use/VRM Class III
UM8	40	Z-2	Z-3	No	None	Private	0		Water/H	Dispersed Use/VRM Class III
UM9	40	Z-1	Z-3	No	None	Private	4	30	Water/M-H	Dispersed Use/VRM Class III

Table A-7a. Resource Assessment (Umatilla Drainage)

Parcel Number	Total Acres	Land Tenure Zone		Legal Access	Existing Rights/Uses	Adjacent Lands	Leased AUMS	Commercial Forest Acres	Erosion Potential	Recreation/ VRM
		Existing	Proposed							
UM10	40	Z-1	Z-3	No	Primitive Road	Private	4	25	Water/M-H	Dispersed Use/VRM Class III
UM11	17.15	Z-1	Z-3	No	Primitive Road	Private	2	14	Water/M-H	Dispersed Use/VRM Class III
UM13	12.74	Z-1	Z-3	No	Primitive Road	Private	1	12.74	Water/H	Dispersed Use/VRM Class III
UM14	91.74	Z-2	Z-3	No	None	Private	9		Water/H	Dispersed Use/VRM Class III
UM15	22.52	Z-2	Z-3	No	None	Private	2		Water/H	Dispersed Use/VRM Class III
UM16	40	Z-2	Z-3	No	None	Private	5		Water/H	Dispersed Use/VRM Class III
UM17	40	Z-2	Z-2	No	Primitive Road	Private	8		Water/H	Dispersed Use/VRM Class III
UM18	160	Z-2	Z-2	No	None	Private	0		Water/L-H Wind/M	Dispersed Use/VRM Class III
UM19	40	Z-2	Z-2	No	None	Private	0		Water/M-H Wind/M	Dispersed Use/VRM Class III
UM20	160	Z-2	Z-2	No	Primitive Road	Private	7		Water/L-H Wind/M	Dispersed Use/VRM Class III
UM21	80	Z-2	Z-2	No	None	Private	3		Water/L Wind/M-H	Dispersed Use/VRM Class III
UM22	40	Z-2	Z-2	No	Primitive Road	Private	2		Water/L Wind-M	Dispersed Use/VRM Class III
UM23	80	Z-2	Z-2	Yes-I-82	R/W-Interstate 82	Private	5		Water/L Wind/H	Dispersed Use/VRM Class III

Table A-7a. Resource Assessment (Umatilla Drainage)

Parcel Number	Total Acres	Land Tenure Zone		Legal Access	Existing Rights/Uses	Adjacent Lands	Leased AUMS	Commercial Forest Acres	Erosion Potential	Recreation/ VRM
		Existing	Proposed							
UM24	20	Z-2	Z-2	Yes-County Road	Powerline R/W County Road 2 Sides	Private	0		Water/L Wind-H	Dispersed Use/VRM Class III
UM25	40	Z-2	Z-2	Yes- County Road to Adj. BLM	Oil & Gas Pipeline R/W, unauthorized. Dumping	Private, Other BLM (UM67)	0		Water/H Wind-H	Dispersed Use/VRM Class III Off-road Vehicle Use/Horse
UM26	40	Z-2	Z-2	Yes-Bensel Road	R/Ws: Powerline, water PL, Access Road, Fence, Monitoring Well, County Road, Irrigation. Ditch, Phone, Unauthorized. Dump	Private & Other BLM	0		Water/H Wind-H	Dispersed Use/VRM Class III Off-road vehicle use/Horse
UM27	37.68	Z-1	Z-2	Yes - Hwy 395, County Road	R/W: Hwy 395, Powerline (2), Phone & Nat. Gas PL	Private & Other BLM	0		Water/L Wind/M-H	Dispersed Use/VRM Class III Across from Power City Wildlife Area
UM28	80	Z-2	Z-2	Yes - County Road	Powerline R/W (3) Irrigation. Ditch, Windbreak Possible Trespass, County Road along Side, Phone, Unauthorized. Dump	Private	5		Water/L Wind-H	Dispersed Use/VRM Class III
UM29	160	Z-1	Z-2	Yes - County Road	County Road, Phone Line along Side	Private	25		Water/L Wind-H	Dispersed Use/VRM Class III Adj. To Cornforth Wildlife Area
UM30	40	Z-2	Z-2	Yes - County Road	R/Ws: RR, Powerline, Water Tank, Bur Rec PL, Phone line	Private, Cold Spring Nwr	6		Water/L Wind-H	Dispersed Use/VRM Class III Adj. To Cold Springs Wildlife Area
UM31	320	Z-2	Z-2	No	Powerline R/W, Fence	Private	25		Water/L Wind/M-H	Dispersed Use/VRM Class III
UM32	160	Z-2	Z-2	No	Agriculture Land Use Plan Primitive Road	Private	12		Water/L-H Wind-M	Dispersed Use/VRM Class III
UM33	160	Z-2	Z-2	No	Powerline R/W	Private	12		Water/L-H Wind-M-H	Dispersed Use/VRM Class III
UM34	40	Z-2	Z-2	Yes- Corp of Engineers.	None	Corp of Engineers. Private	0		Water/L Wind/M-H	Dispersed Use/VRM Class III
UM36	40	Z-2	Z-2	No	Primitive Road, Portion Previously Farmed	Private	3		Water/L-H Wind/M-H	Dispersed Use/VRM Class III
UM37	34.5	Z-2	Z-2	No	Portion Previously Farmed	Private	3		Water/L-H Wind/M-H	Dispersed Use/VRM Class III

Table A-7a. Resource Assessment (Umatilla Drainage)

Parcel Number	Total Acres	Land Tenure Zone		Legal Access	Existing Rights/Uses	Adjacent Lands	Leased AUMS	Commercial Forest Acres	Erosion Potential	Recreation/ VRM
		Existing	Proposed							
UM38	40.09	Z-2	Z-2	No	Old Field-Seeded per Crp	Private	0		Water/M Wind-M	Dispersed Use/VRM Class III
UM39	160	Z-2	Z-2	No	None	Private	0		Water/H	Dispersed Use/VRM Class III
UM47	80	Z-2	Z-3	No	Primitive Road	Private	16		Water/H	Dispersed Use/VRM Class III
UM48	80	Z-1	Z-3	No	None	Private	0	70	Water/M-H	Dispersed Use/VRM Class III
UM62	40	Z-1	Z-2	Yes - I-84, National Forest	Oil &Gas Pipeline, Interstate 84	National Forest& Private	4	27	Water/H	Dispersed Use/VRM Class III
UM64	40	Z-2	Z-2	No	Portion Previously Farmed	Private	0		Water/H	Dispersed Use/VRM Class III
UM72	14.63	Z-2	Z-3	No	None	Private	0		Water/H	Dispersed Use/VRM Class III
UM74	5.07	Z-2	Z-3	No	None	Tribal Trust Private	0		Water/M-H	Dispersed Use/VRM Class III
UM76	37.05	Z-2	Z-2	Yes -Corp of Engineers.	None	Corp of Engineers, Private	5		Water/M-H Wind/M-H	Dispersed Use/VRM Class III
UM77	70.2	Z-2	Z-3	Yes - County Road	None	Private	0		Water/H	Dispersed Use/VRM Class III
UM78	40	Z-2	Z-3	No	None	Private	0		Water/H	Dispersed Use/VRM Class III
UM79	34.27	Z-2	Z-3	No	None	Private	0		Water/M	Dispersed Use/VRM Class III

Table A-7b. Resource Assessment (Umatilla Drainage)

Parcel Number/ Drain Ba.	Vegetation				Large Tree Component		Water Resources/ Riparian/ Wetlands	Noxious Weeds	Wildlife Habitat	Cultural Resources	Special Status Animal	Special Status/ Anadromous Fish or Water Quality	Special Status Plant
	Forest Acres	Range Acres	Forest Type	Range Type	Type	Acres							
M8	20	20		No Botanical Report	P. Pine	20	Yes- ½ Mi Perennial Sperry Creek	None Found	Cavity Nesters Raptors R/F	Surveyed -No Site	Pileated Woodpecker	No	No Data
M9	40			No Botanical Report	P. Pine	34	No	None Found	Amphibian-R/F Grouse-R/F Raptor-F Woodpecker-R/F Elk-Summer Range	Surveyed -No Site	Pileated Woodpecker	No	No Data
M10	10	30	P. Pine	No Botanical Report		--	No	None Found	Elk-W Grouse-F	Surveyed -No Site	None Found	No	No Data
M11	37	3	Mixed Conifer, P. Pine	Idaho Fescue, Elk Sedge, Pine Grass	P. Pine	21	No	None Found	Elk-Summer Range	Surveyed -No Site	Pileated Woodpecker	No	None Found
M12	79	41	Mixed Conifer	Bluebunch Wheatgrass, Sandberg Bluegrass	P. Pine	49	Yes- .02 Perennial .02 Intermittent	None Found	Elk-Year Long Range Cavity Nester-R/F	Surveyed -No Site	Pileated Woodpecker	No	Some Native American Food Plants
M13	12	68		Bluebunch Wheatgrass, Sandberg Bluegrass	P. Pine	12	Yes- .01 Intermittent	None Found	Elk, Deer-YEAR LONG RANGE, Cavity Nester-R/F	Surveyed -No Site	Pileated Woodpecker	No	Some Native American Food Plants
M14		93.99		Bluebunch Wheatgrass, Sandberg Bluegrass, Idaho Fescue			No	None Found	Elk-W	Surveyed -No Site	None Found	No	Some Native American Food Plants
M15	34	6	P. Pine	Bluebunch Wheatgrass, Sandberg Bluegrass, Idaho Fescue	P. Pine	15	No	None Found	Elk-Summer Range	Surveyed -No Site	Pileated Woodpecker	No	Some Native American Food Plants
M24		40		Bluebunch Wheatgrass, Sandberg Bluegrass, Cheat-grass			No	Scotch Thistle	No	Surveyed - No Site	None Found	No	Astragalus Disphanus
M26		40		Rabbit-brush, Cheat-grass, Sandberg Bluegrass			No	None Found	Horned Lark-R/F	Surveyed - No Site	Long Billed Curlew	No	None Found
M28		160		Rabbit-brush, Cheat-grass			No	None Found	No	Surveyed -No Site	None Found	No	None Found
UM8		40		Sandberg Bluegrass, Bluebunch Wheatgrass, Idaho Fescue			No	None Found	No	Surveyed No Site	None Found	No	Some Native American Food Plants
UM9	30	10	P. Pine	No Botanical Report			No	None Found	No	Surveyed No Site	None Found	No	Some Native American Food Plants

Table A-7b. Resource Assessment (Umatilla Drainage)

Parcel Number/ Drain Ba.	Vegetation				Large Tree Component		Water Resources/ Riparian/ Wetlands	Noxious Weeds	Wildlife Habitat	Cultural Resources	Special Status Animal	Special Status/ Anadromous Fish or Water Quality	Special Status Plant
	Forest Acres	Range Acres	Forest Type	Range Type	Type	Acres							
UM10	25	15	P. Pine	No Botanical Report			Yes- .62 Perennial	None Found	No	Surveyed No Site	None Found	No	Some Native American Food Plants
UM11	14	3.15	P. Pine	No Botanical Report			Yes- .09 Mi Intermittent	None Found	Elk-Summer Range	Surveyed No Site	None Found	No	Some Native American Food Plants
UM13	12.74		P. Pine	No Botanical Report			No	None Found	Woodpecker-F	Surveyed No Site	None Found	No	Some Native American Food Plants
UM14		91.74		No Botanical Report			Yes-.4 Mi Ephemeral	None Found	Elk-Sp&F	Surveyed No Site	None Found	No	Some Native American Food Plants
UM15		22.52		No Botanical Report			No	None Found	Elk-Sp	Surveyed No Site	None Found	No	Some Native American Food Plants
UM16		40		No Botanical Report			No	None Found	Elk-Summer Range	Unsurveyed Extreme Slope	None Found	No	Some Native American Food Plants
UM17		40		Sandberg Bluegrass, Bluebunch Wheatgrass, Idaho Fescue			No	Canada Thistle	Meadow Lark-R/F	Unsurveyed	None Found	No	None Found
UM18		160		Rabbit-brush, Bluebunch Wheatgrass, Sandberg Bluegrass			No	None Found	Horned Lark-R/F Meadow Lark-R/F	Surveyed No Site	Burrowing Owl, Long Billed Curlew	No	Astragalus Sclerocarpus
UM19		40		Big Sagebrush, Blue-Bunch Wheatgrass, Sandberg Bluegrass			Yes- 75 Intermittent	None Found	Meadow Lark-R/P	Surveyed No Site	Long Billed Curlew	No	Astragalus Sclerocarpus
UM20		160		Big Sagebrush, Sandberg Bluegrass, Cheat-grass			Yes- 50 Intermittent	None Found	Meadow Lark-R/P	Surveyed No Site	Burrowing Owl, Long Billed Curlew	No	Astragalus Succumbens
UM21		80		Rabbit-brush, Scurf-pea, Cheat-grass			No	None Found	No	Surveyed No Site	Long Billed Curlew, Grasshopper Sparrow	No	Astragalus Sclerocarpus Astragalus Succumbens
UM22		40		Rabbit-brush, Cheat-grass, Sandberg Bluegrass			No	Scotch Thistle	No	Surveyed No Site	Long Billed Curlew	No	Astragalus Succumbens
UM23		80		Rabbit-brush, Cheat-grass			No	None Found	Mourning Dove-R/F, Meadow Lark-R/F	Surveyed No Site	Long Billed Curlew	No	None Found

Table A-7b. Resource Assessment (Umatilla Drainage)

Parcel Number/ Drain Ba.	Vegetation				Large Tree Component		Water Resources/ Riparian/ Wetlands	Noxious Weeds	Wildlife Habitat	Cultural Resources	Special Status Animal	Special Status/ Anadromous Fish or Water Quality	Special Status Plant
	Forest Acres	Range Acres	Forest Type	Range Type	Type	Acres							
UM24		20		Big Sagebrush, Rabbit-brush, Cheat-grass			No	None Found	Horned Lark-R/F, Meadow Lark-R/F	Surveyed No Site	Short Horned Lizard	No	None Found
UM25		40		Big Sagebrush, Rabbit-brush, Cheat-grass			No	None Found	Rock Wren-R/F, Magpie-R/F	Surveyed No Site	Washington Ground Squirrel	No	None Found
UM26		40		Big Sagebrush, Rabbit-brush, Cheat-grass			Intermittent Pond	Some Knapweed	Magpie-R/F, Cliff Swallow-R/F	Surveyed No Site	Long Billed Curlew	No	None Found
UM27		37.68		Big Sagebrush, Rabbit-brush, Cheat-grass			No	None Found	Meadow Lark-R/F	Surveyed Historic Ditch	Short Horned Lizard	No	None Found
UM28		80		Big Sagebrush, Bitter-Brush, Cheat-grass			No	None Found	Magpie-R/F, Quail-R/F	Surveyed No Site	Washington Ground Squirrel	No	None Found
UM29		160		Big Sagebrush, Cheat-grass			No	None Found	Meadow Lark-F, Magpie-F,	Surveyed No Site	Short Horned Lizard	No	None Found
UM30		40		Big Sagebrush, Cheat-grass, Crested Wheatgrass			No	None Found	Meadow Lark-F, Quail-F	Surveyed No Site	Grasshopper Sparrow	No	Astragalus Sclerocarpus
UM31		320		Big Sagebrush, Rabbit-brush, Cheat-grass			No	None Found	Meadow Lark-R/F, Quail-R/F	Unsurveyed	Long Billed Curlew, Grasshopper Sparrow	No	Astragalus Succumbens Astragalus Sclerocarpus
UM32		160		Big Sagebrush, Rabbit-brush, Cheat-grass			No	None Found	Quail-R/F, Magpie-R/F, Meadow Lark-R/F	Surveyed No Site	Loggerhead Shrike	No	Astragalus Succumbens
UM33		160		Big Sagebrush, Rabbit-brush, Cheat-grass			No	None Found	Quail-R/F, Horned Lark-R/F	Unsurveyed	Loggerhead Shrike	No	Astragalus Succumbens
UM34		40		Big Sagebrush, Rabbit-brush, Cheat-grass			No	Scotch Thistle	Quail-R/F, Sage Sparrow-R/F	Unsurveyed	None Found	No	None Found
UM36		40		No Botanical Report			No	None Found	Horned Lark-R/F	Surveyed No Site	Long Billed Curlew	No	None Found

Table A-7b. Resource Assessment (Umatilla Drainage)

	Vegetation				Large Tree Component								
Parcel Number/ Drain Ba.	Forest Acres	Range Acres	Forest Type	Range Type	Type	Acres	Water Resources/ Riparian/ Wetlands	Noxious Weeds	Wildlife Habitat	Cultural Resources	Special Status Animal	Special Status/ Anadromous Fish or Water Quality	Special Status Plant
UM37		35.5		No Botanical Report			No	None Found	Pheasant-R/F Magpie-R/F	Surveyed No Site	Long Billed Curlew	No	None Found
UM38		40.09		No Botanical Report			No	None Found	Meadow Lark-R/F	Unsurveyed	None Found	No	None Found
UM39		160		Stiff-Sage, Cheat-grass, Medusa-Head			Yes-.70 Mi Intermittent	None Found	Deer, Elk, Bear, Cougar-YEAR LONG RANGE	Unsurveyed	None Found	Yes - Steelhead	Some Native American Food Plants
UM47		80		Bluebunch Wheatgrass, Sandberg Bluegrass, Idaho Fescue			No	None Found	Deer-Summer Range	Surveyed No Site	None Found	No	None Found
UM48	70	10	Mixed Conifer	No Botanical Report			No	None Found	Woodpecker-R/F Elk-Summer Range	Unsurveyed	None Found	No	No Data
UM62	37	3	Mixed Conifer	No Botanic Report	Mixed Conifer	37	Yes-.04 Mi Ephemeral	None Found	Elk-Summer Range	Surveyed No Site	Pileated Woodpecker	No	No Data
UM64		40		No Botanic Report			No	None Found	No	Unsurveyed	None Found	No	No Data
UM72		14.63		No Botanic Report			No	None Found	Not Assessed	Unsurveyed	Not Assessed	No	No Data
UM74		5.07		No Botanic Report			Yes -.02 Mi Intermittent	None Found	No	Unsurveyed	None Found	Yes Steelhead	No Data
UM76		37.05		No Botanic Report			No	None Found	Not Assessed	Unsurveyed	Not Assessed	No	No Data
UM77		70.2		No Botanic Report			No	None Found	Not Assessed	Unsurveyed	Not Assessed	No	No Data
UM78		40		No Botanic Report			Yes-1/4 Mi Little Pearson Intermittent	None Found	Not Assessed	Unsurveyed	Not Assessed	Yes Steelhead	No Data
UM79		34.27		No Botanic Report			Yes-.03 Mi Little Pearson Intermittent	None Found	Not Assessed	Unsurveyed	Not Assessed	Yes Steelhead	No Data

Table A-7c. Resource Assessment (John Day Drainage)

Parcel Number	Total Acres	Land Tenure Zone		Legal Access	Existing Rights/Uses	Adjacent Lands	Leased AUMS	Commercial Forest Acres	Erosion Potential	Recreation/ VRM
		Existing	Proposed							
M1	80	Z-1	Z-2	No	None	Private	Administered by Prineville District	30	Water/L-H	Dispersed Use/VRM Class III
M2	21.58	Z-1	Z-2	No	None	Private	3	12	Water/L-H	Dispersed Use/VRM Class III
M4	160	Z-1	Z-2	No	Primitive Road	BLM-Parcel M31	20	20	Water/S-M	Dispersed Use/VRM Class III
M5	24.12	Z-1	Z-2	No	None	Private	0	20	Water/M-H	Dispersed Use/VRM Class III
M6	38.62	Z-1	Z-2	No	Primitive Road	Private	8	25	Water/S-H	Dispersed Use/VRM Class III
M31	120	Z-1	Z-2	No	Primitive Road	Private BLM	15		Water/M	Dispersed Use/VRM Class III
UM4	78.74	Z-1	Z-3	Yes- National Forest	Primitive Road	National Forest & Private	12	53	Water/M-H	Dispersed Use/VRM Class III
UM5	40	Z-2	Z-3	No	Primitive Road	Private	0		Water/M	Dispersed Use/VRM Class III
UM6	273.28	Z-1	Z-3	Yes- National Forest & County Road	County Road Primitive Road	National Forest & Private	28	107	Water/M-H	Dispersed Use/VRM Class III
UM7	80	Z-1	Z-3	Yes- National Forest	Road R/W	National Forest & Private	8	47	Water/M-H	Dispersed Use/VRM Class III National Forest Border Wr/Road Closure
UM50	40	Z-1	Z-3	Yes -County Road	Powerline R/W County Road	Private	6	22	Water/H	Dispersed Use/VRM Class III
UM52	40	Z-1	Z-3	No	None	Private	6	30	Water/M	Dispersed Use/VRM Class III
UM54	40	Z-2	Z-3	No	Primitive Road Through Corner	Private	Administered by Prineville District		Water/M	Dispersed Use/VRM Class III

Table A-7c. Resource Assessment (John Day Drainage)

Parcel Number	Total Acres	Land Tenure Zone		Legal Access	Existing Rights/Uses	Adjacent Lands	Leased AUMS	Commercial Forest Acres	Erosion Potential	Recreation/ VRM
		Existing	Proposed							
UM55	80	Z-1	Z-3	Yes - National Forest	None	National Forest& Private	10	71	Water/M-H	Dispersed Use/VRM Class III
UM57	80	Z-1	Z-3	No	Primitive Road	Private	13	47	Water/M-H	Dispersed Use/VRM Class III
UM58	40	Z-1	Z-2	No	Primitive Road	Private	8	10	Water/M	Dispersed Use/VRM Class III
UM59	40	Z-2	Z-2	No	None	Private	8		Water/M	Dispersed Use/VRM Class III
UM59A	40	Z-2	Z-2	No	None	Private	8	7	Water/M-H	Dispersed Use/VRM Class III
UM60	40	Z-1	Z-2	Yes - National Forest	Primitive Road	National Forest& Private	0	40	Water/H	Dispersed Use/VRM Class III
UM61	33	Z-1	Z-2	Yes - National Forest	Primitive Road Through Corner	National Forest& Private	7	33	Water/H	Dispersed Use/VRM Class III
UM70	40	Z-1	Z-2	Yes - ST. Land Hwy 395	Hwy 395, Primitive Road Through Corner	Private & State	6	28	Water/M-H	Dispersed Use/VRM Class III
UM80	69.06	Z-1	Z-2	No	Primitive Road, Cabin	Private	14	46	Water m-H	Dispersed Use/VRM Class III

Table A-7d. Resource Assessment (John Day Drainage)

Parcel Number/ Drain Ba.	Vegetation				Large Tree Component		Water Resources/ Riparian/ Wetlands	Noxious Weeds	Wildlife Habitat	Cultural Resources	Special Status Animal	Special Status/ Anadromous Fish or Water Quality	Special Status Plant
	Forest Acres	Range Acres	Forest Type	Range Type	Type	Acres							
M1	30	50	P. Pine	Stiff Sagebrush, Idaho Fescue,Sandberg Bluegrass	P..Pine	15	No	None Found	Elk-YL Woodpecker-F N.flicker-F	Surveyed -No Site	Pileated Woodpecker Flammulated Owl	No	Some Native American Food Plants
M2	12	10.58	D. Fir P. Pine	Bluebunch Wheatgrass Idaho Fescue		--	Yes -1/4 Mi Intermittent	None Found	Deer-SU Chickadee-R/F	Unsurveyed Extreme Slope -No Site	None Found	No Fish/High Water Quality	None Found
M4	20	140	P. Pine	Stiff Sagebrush, Sandberg Bluegrass, Idaho Fescue		--	No	None Found	Elk - F Horned Lark-F	1/2 Surveyed - No Site	None Found	No	Probably Some Native American Food Plants.
M5	20	4.12	P. Pine	Idaho Fescue		--	No	None Found	Elk-SU	Surveyed - No Site	None Found	No	None Found
M6	25	13.62	P. Pine	Sandberg Bluegrass		--	No	None Found	Ground Squirrel-R/F	Surveyed - No Site	None Found	No	None Found
M31		120		No Botanical Report			Yes - Ephemeral	None Found	Deer-F&Sp Elk-F&Sp	Surveyed -No Site	None Found	No	None Found
Um4	53	25.74	P. Pine D. Fir	Idaho Fescue, Sandberg Bluegrass			Yes-1/4 Mi Intermittent	None Found	Elk-Su Red Squirrel-R/F	Unsurveyed	None Found	No Fish/High Water Quality	None Found
Um5		40		Bluebunch Wheatgrass, Junegrass, Sandberg Bluegrass			No	None Found	No	Surveyed No Site	None Found	No	Some Native American Food Plants
Um6	107	166.28	P. Pine Larch	Sandberg Bluegrass, Idaho Fescue, Junegrass			Yes-3/8 Mi Ephemeral	None Found	Elk-Su Bat-R/F Chipmunk-R/F	Surveyed No Site	None Found	No	None Found
Um7	47	33	P. Pine	Sandberg Bluegrass, Idaho Fescue, Junegrass			Yes-1/2 Mi Ephermeral	None Found	Deer-Su Stellers Jay-R/F A. Kestrel-R/F Nuthatch-R/F	Surveyed No Site	None Found	No	None Found
Um50	22	18	P. Pine	Bluebunch Wheatgrass, Idaho Fescue, Sandberg Bluegrass			No	None Found	Deer-Su	Surveyed No Site	None Found	No	None Found
Um52	30	10	P. Pine	Idaho Fescue, Elk Sedge, Cheat-grass			Yes- 1/4 Mi Epemeral	None Found	Stellers Jay-R/F, A.robin-R/F	Surveyed No Site	None Found	No	None Found
Um54		40		Idaho Fescue, Junegrass, Bluebunch Wheatgrass			Yes-1/2 Acre Wetland	None Found	Killdeer-R/F, C.nighthawk-R/F, Bats-F	Surveyed No Site	None Found	Yes Steelhead	Some Native American Food Plants
Um55	71	9	P. Pine	Sandberg Bluegrass, Bluebunch Wheatgrass, Seeded Species			Yes-1/4mi Ephemeral	None Found	Deer-Su	Surveyed No Site	Pileated Woodpeckers	No	None Found

Table A-7d. Resource Assessment (John Day Drainage)

Parcel Number/ Drain Ba.	Vegetation				Large Tree Component		Water Resources/ Riparian/ Wetlands	Noxious Weeds	Wildlife Habitat	Cultural Resources	Special Status Animal	Special Status/ Anadromous Fish or Water Quality	Special Status Plant
	Forest Acres	Range Acres	Forest Type	Range Type	Type	Acres							
Um57	47	33	P. Pine D. Fir	Elk Sedge, Junegrass, Sandberg Bluegrass	P. Pine D. Fir	47	No	None Found	Elk-Su, Red Squirrel-R/F, Nuthatch-R.f	Surveyed No Site	None Found	No	None Found
Um58	10	30	P. Pine	No Botanic Report			No	None Found	Elk-Sp	Unsurveyed	None Found	Yes Steelhead	Some Native American Food Plants
Um59		40	P. Pine	Idaho Fescue, Junegrass, Sandberg Bluegrass			No	None Found	Elk-Sp	Surveyed No Site	None Found	No	None Found
Um59a	7	33		No Botanic Report			No	None Found	Not Assessed	Unsurveyed	Not Assessed	Yes Steelhead	No Data
Um60	40		Larch L. Pine	Elk Sedge, Timothy			Yes-1/8 Mi Perennial	None Found	Elk-YL	Surveyed No Site	Pileated Woodpecker	Yes Steelhead	None Found
Um61	33		P. Pine	Elk Sedge, Bluebunch Wheatgrass, Idaho Fescue	P. Pine	6	Yes-1/4 Mi Perennial	None Found	Elk -Su	Surveyed No Site	Pileated Woodpecker	Yes Steelhead	None Found
Um70	28	12	P. Pine Larch	No Botanic Report	Mixed	28	Yes - 0.02 Perennial	None Found	Elk-W, Warbler-R/F	Unsurveyed	None Found	Yes Steelhead Bull Trout	No Data
Um80	46	23.06	L.pine W. Fir	No Botanic Report			Yes-1/4 Mi Intermittent	None Found	Elk-Su	Unsurveyed	None Found	Yes Steelhead	No Data

Appendix B
Table B-1. Common Wildlife Species and Provinces Where They are Widespread or Abundant.

Wildlife Species		Province		
Common Name	**Scientific Name**	**Blue Mountains**	**High Lava Plains**	**Columbia Basin**
Herptiles				
Pacific Treefrog	*Pseudacris regilla*	X	X	X
Western Fence Lizard	*Sceloporus occidentalis*		X	X
Side-blotched Lizard	*Uta stansburiana*		X	X
Short-horned Lizard	*Phrynosoma douglassi*		X	X
Racer	*Coluber constrictor*	X	X	X
Gopher Snake	*Pituophis melanoleucus*		X	X
Western Rattlesnake	*Crotalus viridus*	X	X	X
Birds				
Great Blue Heron	*Ardea herodias*	X	X	X
Canada Goose	*Branta canadensis*	X	X	X
Green-winged Teal	*Anas crecca*	X	X	X
Mallard	*Anas platyrhynchos*	X	X	X
Northern Pintail	*Anas acuta*	X	X	X
Cinnamon Teal	*Anas cyanoptera*	X		X
Northern Shoveler	*Anas clypeata*	X		X
Gadwall	*Anas strepera*	X	X	X
American Widgeon	*Anas americana*	X	X	X

Appendix B

Table B-1. Common Wildlife Species and Provinces Where They are Widespread or Abundant.

Wildlife Species		Province		
Common Name	**Scientific Name**	**Blue Mountains**	**High Lava Plains**	**Columbia Basin**
Redhead	*Aythya americana*	X		X
Common Goldeneye	*Bucephala clangula*	X		X
Bufflehead	*Bucephala albeola*	X		
Turkey Vulture	*Cathartes aura*	X	X	X
Norther Harrier	*Circus cyaneus*			X
Red-tailed Hawk	*Buteo jamaicensis*	X	X	X
Rough-legged hawk	*Buteo lagopus*	X	X	X
American Kestrel	*Falco sparverius*	X	X	X
Gray Partridge	*Perdix perdix*	X		X
Chukar	*Alectoris chukar*	X	X	X
California Quail	*Callipepla californica*	X	X	X
Sora	*Porzana carolina*	X	X	X
American Coot	*Fulica americana*	X	X	X
Killdeer	*Charadrius vociferus*	X	X	X
Western Sandpiper	*Calidris mauri*	X	X	X
Least Sandpiper	*Calidris minutilla*	X	X	X
Rock Dove	*Columba livia*	X	X	X
Mourning Dove	*Zenaida macroura*	X	X	X

Appendix B
Table B-1. Common Wildlife Species and Provinces Where They are Widespread or Abundant.

Wildlife Species		Province		
Common Name	**Scientific Name**	**Blue Mountains**	**High Lava Plains**	**Columbia Basin**
Great Horned Owl	*Bubo virginianus*	X	X	X
Common Nighthawk	*Chordeiles minor*	X	X	X
Northern Flicker	*Colaptes auratus*	X	X	X
Dusky Flycatcher	*Empidonax oberholseri*	X	X	
Gray Flycatcher	*Empidonax wrightii*		X	X
Western Kingbird	*Tyrannus verticalis*	X	X	X
Horned Lark	*Eremophila alpestris*	X	X	X
Tree Swallow	*Tachycineta bicolor*	X	X	X
Violet-green Swallow	*Tachycineta thalassina*	X	X	X
Cliff Swallow	*Hirundo rustica*	X	X	X
Mountain Chickadee	*Parus gambeli*	X	X	
Rock Wren	*Salpinctes obsoletus*	X	X	X
Mountain Bluebird	*Sialia currucoides*	X	X	X
American Robin	*Turdus migratorius*	X	X	X
Sage Thrasher	*Oreoscoptes montanus*	X	X	X
Warbling Vireo	*Vireo gilvus*	X	X	X
Yellow Warbler	*Dendroica petechia*	X	X	X
Yellow-rumped Warbler	*Dendroica coronata*	X	X	X

Appendix B
Table B-1. Common Wildlife Species and Provinces Where They are Widespread or Abundant.

Wildlife Species		Province		
Common Name	**Scientific Name**	**Blue Mountains**	**High Lava Plains**	**Columbia Basin**
Common Yellowthroat	*Geothlypis trichas*	X	X	X
Lazuli Bunting	*Passerina amoena*	X	X	X
Brewer's Sparrow	*Spizella breweri*		X	X
Vesper Sparrow	*Pooecetes gramineus*	X	X	X
Sage Sparrow	*Amphispiza belli*		X	X
Savannah Sparrow	*Passerculus sandwichensis*	X	X	X
Song Sparrow	*Melospiza melodia*	X	X	X
Dark-eyed Junco	*Junco hyemalis*	X	X	X
Mammals				
California Myotis	*Myotis californicus*	X	X	X
Long-eared Myotis	*Myotis evotis*	X	X	X
Little Brown Myotis	*Myotis lucifugus*	X	X	X
Fringed Myotis	*Myotis thysanodes*	X	X	X
Long-legged Myotis	*Myotis volans*	X	X	X
Hoary Bat	*Lasiurus cinereus*	X	X	X
Silver-haired Bat	*Lasionycteris noctivagans*	X	X	X
Big Brown Bat	*Eptesicus fuscus*	X	X	X
Pallid Bat	*Antrozous pallidus*	X		X

Appendix B
Table B-1. Common Wildlife Species and Provinces Where They are Widespread or Abundant.

Wildlife Species		Province		
Common Name	**Scientific Name**	**Blue Mountains**	**High Lava Plains**	**Columbia Basin**
Mountain Cottontail	*Sylvilagus nuttallii*	X	X	X
Black-tailed Jackrabbit	*Lepus californicus*		X	X
Least Chipmunk	*Tamias siskiyou*	X	X	
Belding's Gound Squirrel	*Spermophilus beldingi*		X	X
Golden-mantled Ground Squirrel	*Spermophilus lateralis*	X	X	X
Townsend's Ground Squirrel	*Spermophilus townsendii*		X	X
Northern Pocket Gopher	*Thomomys talpoides*	X	X	X
Great Basin Pocket Mouse	*Perognathus parvus*		X	X
Ord's Kangaroo Rat	*Dipodomys ordii*		X	X
American Beaver	*Castor canadensis*	X	X	X
Deer Mouse	*Peromyscus maniculatus*	X	X	X
Bushy-tailed Woodrat	*Neotoma cinerea*	X	X	X
Montane Vole	*Microtus montanus*	X	X	X
Sagebrush Vole	*Lemmiscus curtatus*		X	X
Common Muskrat	*Ondatra zibethicus*	X	X	X
Coyote	*Canus latrans*	X	X	X
Ermine	*Mustela erminea*	X	X	X
Long-tailed Weasel	*Mustela frenata*	X	X	X

Appendix B
Table B-1. Common Wildlife Species and Provinces Where They are Widespread or Abundant.

Wildlife Species		Province		
Common Name	**Scientific Name**	**Blue Mountains**	**High Lava Plains**	**Columbia Basin**
Bobcat	*Lynx rufus*	X	X	X
Mink	*Mustela vison*	X	X	X
Mule Deer	*Odocoileus hemionus*	X	X	X
Rocky Mountain Elk	*Cervus elaphus nelsoni*	X		

Source: Puchy et al. 1993.

Appendix B
Table B-2. Fish Species Occurring in the NOALE Analysis Area.

Common Name and Scientific Name	ESA Listing Status	Bureau Sensitive	Basin where Species Is Known to Occur[1]			
			JD	UM	GR	P
Chinook salmon *(Oncorhynchus tshawytscha)*			X	X		
Snake River Chinook *(Oncorhynchus tshawytscha)* Spring Fall	Threatened Threatened				X	
Kokanee salmon (*Oncorhynchus nerka*)			X		X	
Snake River steelhead trout (*Oncorhynchus mykiss*)	Proposed Threatened				X	
Steelhead (Mid-Columbia ESU) (*Oncorhynchus mykiss*)	Candidate		X	X		
Redband trout, resident (*Oncorhynchus mykiss*)		X	X	X	X	X
Rainbow trout (resident and introduced) (*Oncorhynchus mykiss mykiss*)			X	X	X	X
Westslope cutthroat trout (*Oncorhynchus clarki lewisi*)		X	X			
Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*)			X			
Bull trout (*Salvelinus confluentus*)	Proposed Threatened		X	X	X	X
Brook trout (*Salvelinus fontinalis*)			X	X	X	X
Mountain whitefish (*Prosopium williamsoni*)			X	X	X	X
Pauite sculpin (*Cottus beldingi*)			X	X	X	X
Shorthead sculpin (*Cottus confusus*)			X	X	X	X
Margined sculpin (*Cottus marginus*)		X		X		
Prickly sculpin (*Cottus asper*)				X	X	X
Mottled sculpin (*Cottus bairdi*)				X	X	X

Appendix B
Table B-2. Fish Species Occurring in the NOALE Analysis Area.

Common Name and Scientific Name	ESA Listing Status	Bureau Sensitive	Basin where Species Is Known to Occur[1]			
			JD	UM	GR	P
Riffle sculpin (*Cottus gulosus*)				X	X	X
Reticulate sculpin (*Cottus perplexus*)				X	X	X
Torrent sculpin (*Cottus rhotheus*)				X	X	X
Bridgelip sucker (*Catostomus columbianus*)			X	X	X	X
Largescale sucker (*Catostomus macrocheilus*)			X	X	X	X
Mountain sucker (*Catostomus platyrhynchus*)			X			
Carp (*Cyprinus carpio*)			X	X	X	X
Chiselmouth (*Acrocheilus alutaceus*)			X	X	X	X
Northern squawfish (*Ptychocheilus oregonensis*)			X	X	X	X
Longnose dace (*Rhinichthys cataractae*)			X	X	X	X
Speckled dace (*Rhinichthys osculus*)			X	X	X	X
Leopard dace (*Rhinichthys falcatus*)				X	X	X
Redside shiner (*Richardsonius balteatus*)			X	X	X	X
Peamouth (*Mylocheilus caurinus*)			X	X	X	X
Smallmouth bass (*Micropterus dolomieui*)			X	X	X	X
Largemouth bass (*Micropterus salmoides*)			X			
Bluegill (*Lepomis macrochirus*)			X	X	X	X
Pumpkinseed (*Lepomis gibbosus*)				X	X	X

Appendix B
Table B-2. Fish Species Occurring in the NOALE Analysis Area.

Common Name and Scientific Name	ESA Listing Status	Bureau Sensitive	Basin where Species Is Known to Occur[1] JD	UM	GR	P
White crappie (*Pomoxis annularis*)				X	X	X
Black crappie (*Pomoxis nigromaculatus*)				X	X	X
Goldfish (*Carassius auratus*)				X	X	X
Channel catfish (*Ictalurus punctatus*)			X	X	X	X
Brown bullhead (*Ictalurus nebulosus*)			X	X	X	X
Yellow bullhead (*Ictalurus natalis*)				X	X	X
Yellow perch (*Perca flavescens*)				X	X	X
Pacific lamprey (*Lampetra tridentata*)		X	X	X	X	X
Western brook lamprey (*Lampetra richardsoni*)			X			

[1] JD = John Day Basin
UM = Umatilla Basin
GR = Grande Ronde Basin
P = Powder River Basin

[2] ESA Listing Status as of 6/10/1997

Source of Occurrence Data: ODFW 1989

Appendix B
Table B-3. Special Status Wildlife Species by Major Land Types for the Northeast Oregon Assembled Land Exchange

Species	*Federally Listed T-Threatened E-Endangered C-Candidate*	*USFWS Species of Concern*	*Oregon Natural Heritage Program (1) Critical (2) Imperiled (3) Rare (4) Not rare*	*USFS Sensitive*	*BLM Sensitive*	*ODFW (SC) Critical (SV) Vulnerable (SP) Peripheral (SU) Status Undetermined (LT) Listed Threatened*	*Major Land Type*		
							Forest	*Range*	*Riparian*
HERPTILES									
Northern Sagebrush Lizard		X	3		X			X	
Northern Leopard Frog			2		X	SC			X
Columbia Spotted Frog	C		3		X	SU			X
Northwest Painted Turtle			2	X	X	SC			X
Western Toad			3			SV			X
Woodhouse's Toad			3			SP			X
Tailed Frog		X	3		X	SV			X
BIRDS									
Northern Goshawk		X	3	X	X	SC	X		
Great Gray Owl			4			SV	X		
Pileated Woodpecker			4	X	X	SC	X		

Appendix B
Table B-3. Special Status Wildlife Species by Major Land Types for the Northeast Oregon Assembled Land Exchange

Species	Federally Listed T-Threatened E-Endangered C-Candidate	USFWS Species of Concern	Oregon Natural Heritage Program (1) Critical (2) Imperiled (3) Rare (4) Not rare	USFS Sensitive	BLM Sensitive	ODFW (SC) Critical (SV) Vulnerable (SP) Peripheral (SU) Status Undetermined (LT) Listed Threatened	Major Land Type		
							Forest	Range	Riparian
Lewis Woodpecker			3		X	SC	X		
White-Headed Woodpecker			3		X	SC	X		
Three-toed Woodpecker			4		X	SC	X		
Black-backed Woodpecker			4		X	SC	X		
Flammulated Owl			4		X	SC	X		
Williams Sapsucker			3			SC	X		
Western Blue Bird			4			SC	X		
Western Burrowing Owl		X	3		X	SC		X	
Columbian Sharp-tailed Grouse		X	1		X			X	
Western Sage Grouse		X	3	X	X	SC		X	
Ferruginous Hawk		X	3	X	X	SC		X	
Upland Sandpiper			2		X	SC		X	

Appendix B
Table B-3. Special Status Wildlife Species by Major Land Types for the Northeast Oregon Assembled Land Exchange

Species	***Federally Listed T-Threatened E-Endangered C-Candidate***	***USFWS Species of Concern***	***Oregon Natural Heritage Program (1) Critical (2) Imperiled (3) Rare (4) Not rare***	***USFS Sensitive***	***BLM Sensitive***	***ODFW (SC) Critical (SV) Vulnerable (SP) Peripheral (SU) Status Undetermined (LT) Listed Threatened***	***Major Land Type***		
							Forest	***Range***	***Riparian***
Loggerhead Shrike			4			SV		X	
Olive-sided Flycatcher		X							X
Harlequin Duck		X	2	X	X	SU			X
Tricolored Blackbird		X	2	X	X	SP			X
Grasshopper Sparrow			3			SV		X	
Black Tern		X	3		X				X
Long-billed Curlew			4	X				X	
Swainsons Hawk		X	3			SV		X	
Peregrine Falcon	E	X	1	X	X	LE			X
Bank Swallow			4			SV			X
Bald Eagle	T	X	1	X	X	LT			X

Appendix B

Table B-3. Special Status Wildlife Species by Major Land Types for the Northeast Oregon Assembled Land Exchange

Species	Federally Listed T-Threatened E-Endangered C-Candidate	USFWS Species of Concern	Oregon Natural Heritage Program (1) Critical (2) Imperiled (3) Rare (4) Not rare	USFS Sensitive	BLM Sensitive	ODFW (SC) Critical (SV) Vulnerable (SP) Peripheral (SU) Status Undetermined (LT) Listed Threatened	Major Land Type		
							Forest	Range	Riparian
MAMMALS									
American Marten			3	X		SV	X		
Pacific Fisher		X	2	X	X	SC	X		
California Wolverine		X	2	X	X	LT	X		
California Bighorn Sheep		X	4	X	X			X	
North American Lynx		X	2	X	X		X		
Gray Wolf	E	X	2	X	X		X		
Washington Ground Squirrel		X	2		X	SC		X	
Pygmy Rabbit		X	3	X	X	SV		X	
White-tailed Jack Rabbit			3			SV		X	
Long-legged Myotis		X	3			SU	X		
Spotted Bat		X			X			X	

Appendix B

Table B-3. Special Status Wildlife Species by Major Land Types for the Northeast Oregon Assembled Land Exchange

Species	**Federally Listed** **T-Threatened** **E-Endangered** **C-Candidate**	**USFWS Species of Concern**	**Oregon Natural Heritage Program** **(1) Critical** **(2) Imperiled** **(3) Rare** **(4) Not rare**	**USFS Sensitive**	**BLM Sensitive**	**ODFW** **(SC) Critical** **(SV) Vulnerable** **(SP) Peripheral** **(SU) Status Undetermined** **(LT) Listed Threatened**	**Major Land Type**		
							Forest	**Range**	**Riparian**
Small-footed Myotis		X	3		X	SU		X	
Long-eared Myotis		X	3		X	SU	X		
Fringed Myotis		X	3			SV			X
Yuma Myotis		X	3			SU			X
Pale Western Big-eared bat		X	3			SC	X		
Pacific Western Big-eared bat		X	2	X	X	SC	X		

Appendix B
Table B-4. Special Status Plant Species Known to Occur, or Having Potential to Occur, in the Northeast Oregon Assembled Land Exchange Area.

Common Name	Scientific Name	Status	Occurrence
Transparent milkvetch	*Astragulus diaphanus* var. *diaphanus*	Tracking species (BLM and ONHP)	Umatilla Basin
Stalked-pod milkvetch	*Astragulas sclerocarpus*	Tracking species (BLM and ONHP)	Umatilla Basin
Crouching or Columbia milkvetch	*Astragulus succumbens*	Tracking species (BLM and ONHP)	Umatilla Basin
Snake River goldenweed	*Haplopappus radiatus*	State Endangered and BLM Sensitive	Powder River Basin
Oregon semaphore grass	*Pleuropogon oreganus*	State Threatened and BLM Sensitive	Powder River Basin
Grape fern	*Botrychium crenulatum*	Federal Candidate and BLM Sensitive	Powder River Basin
Onions	*Allium* sp.	Tracking Species (BLM and ONHP)	Powder River Basin
South Fork John Day milkvetch	(*Astgragulus diaphanus* var. *diurnus*)	Bureau Sensitive State Threatened	John Day Basin
Henderson's Ricegrass	(*Achnatherum hendersonii*)	Bureau Sensitive State Candidate	John Day Basin
Wallowa Ricegrass	(*A. Wallowensis* sp.nov.)	Bureau Sensitive	John Day Basin
Porcupine Sedge	(*Carex hystericina*)	Assessment Species	John Day Basin
Hepatic Monkeyflower	(*M.jungermanniodes*)	Bureau Sensitive State Candidate	John Day Basin
Arrowleaf Thelypody	(*Thelypodium eucosmum*)	Bureau Sensitive, State Threatened	John Day Basin
Hedgehog cactus	*Pediocactus simpsonii* var. *Robustior*	Tracking species (BLM)	John Day Basin
Nevius' chaenactis	*Chaenactis nevii*	Tracking species (BLM)	John Day Basin

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Appendix B
Table B-5. Parcels Containing Forestland with Old-Growth Characteristics (Phase 1)

		Acres[2]	
Parcel By County[1]	**Legal Description**	**John Day Basin**	**Umatilla Basin**
Morrow County			
M1	T. 6 S., R. 25 E., Sec. 7, NE¼SE¼ T. 6 S., R. 25 E., Sec. 8, NW¼SW¼	15	
M8	T. 5 S., R. 26 E., Sec. 11, SW¼SW¼		20
M9	T. 5 S., R. 27 E., Sec. 17, NE¼SE¼		34
M11	T. 4 S., R. 28 E., Sec.15, NE¼NE¼		21
M12	T. 4 S., R. 28 E., Sec.1, SE¼NE¼, N½SE¼		49
M13	T. 4 S., R. 29 E., Sec. 6, SE¼SW¼, SW¼SE¼		12
M15	T. 4 S., R. 29 E., Sec. 3, NE¼SE¼		15
Umatilla County			
UM57	T. 5. S., R. 31 E., Sec. 17, N½SE¼	53	
UM61	T. 6 S., R. 33 E., Sec. 6, Lot 5	6	
UM62	T. 1 S., R. 35 E., Sec. 25, Lot 2		37
UM70	T. 5. S., R. 31 E., Sec. 21, SW¼NW¼	28	
Wheeler County			
W1	T. 6 S., R. 23 E., Sec. 23, NE¼SW¼	10	
W2	T. 7. S, R. 22 E. Sec. 12, Lot 3, NW¼NE¼	20	
W5	T. 7. S, R. 22 E. Sec. 20, SW¼NE¼	15	
W7	T. 7. S, R. 22 E. Sec. 25, NE¼NE¼, S½NW¼	12	
W8	T. 7. S, R. 22 E. Sec. 25, NE¼NE¼, S½NW¼	45	
W10	T. 7. S, R. 22 E. Sec. 34, NE¼SW¼	30	
W14	T. 8 S., R. 23 E. Sec. 9, S½SW¼	40	
W17	T. 8 S., R. 22 E. Sec. 6, SE¼SW¼	47	
W20	T. 8 S., R. 23 E. Sec. 30, Lots 2 and 3 (38.82 and 38.94 acres, respectively), SE¼SW¼	20	

Appendix B
Table B-5. Parcels Containing Forestland with Old-Growth Characteristics (Phase 1)

Parcel By County[1]	Legal Description	Acres[2] John Day Basin	Acres[2] Umatilla Basin
W21	T. 8 S., R. 22 E. Sec. 35, N½NE¼	15	
Grant County			
G2	T. 7 S., R. 30 E. Sec. 23, SE¼SW¼, NE¼SE¼	36	
G3	T. 7 S., R. 30 E. Sec. 23, SE¼SW¼, NE¼SE¼	28	
G88	T. 10 S., R. 27 E. Sec. 22, S½SW¼	14	
G104A	T. 10 S., R. 31 E. Sec. 29, W½SW¼	30	
G104B	T. 10 S., R. 31 E. Sec. 30, Lot 2	10	
G113	T. 11 S., R. 28 E. Sec. 20, W½NW¼	35	
G125	T. 11. S. , R. 27 E., Sec. 11, N½NE¼	60	
G150A	T. 12 S., R. 30 E. Sec. 24, SE¼NE¼, W½, W½E½, NE¼SE¼	100	
G159	T. 12 S., R. 33 E. Sec. 16, S½NE¼, E½SE¼	36	
G197	T. 14 S., R. 29 E. Sec. 11, E½NE¼, N½S½	40	
G210	T. 14 S., R 31 E. Sec. 27, E½SE¼	25	
G210B	T.14 S., R 13 E. Sec. 15, NE¼NW¼, SE¼NE¼, NW¼SW¼, S½SW¼, W½SE¼	28	
G236B	T. 18 S., R. 26 E. Sec. 25, N½NW¼	15	
G237	T. 18 S., R. 26 E. Sec. 12, SW¼NE¼, S½NW¼, E½SW¼, NW¼SE¼ or Sec. 13, N½NW¼	61	
G239B	T. 18 S., R. 26 E. Sec. 2, Lots 1 and 2, S½NE¼, W½SE¼, (40.62, 40.50)	15	
G240A	T. 17 S., R. 26 E. Sec. 25, NE¼SE¼, S½SE¼	20	
G271	T. 18 S., R. 28 E. Sec. 12, SE¼	30	

Appendix B
Table B-5. Parcels Containing Forestland with Old-Growth Characteristics (Phase 1)

Parcel By County[1]	Legal Description	Acres[2]	
		John Day Basin	Umatilla Basin
Basin Summary			
Number of Parcels Having Old Growth		31	7
Average Size of Parcels		30	27
Range of Parcel Size		100	49
Potential Disposal Forestland With Old Growth, By Basin *Total for 2 basins*: 1,127 acres		939	188
County Summary			
Potential Disposal Forestland With Old Growth, By County			
Morrow	166 acres		
Umatilla	124 acres		
Wheeler	254 acres		
Grant	583 acres		

[1] Grande Ronde and Powder River Basins are not included on this table, because potential acquisition lands in those two basins are in future transactions and, to date, are not identified.

[2] Acreages on this table may differ slightly from text references, as some data was derived from cruise data and some from inventory data.

Appendix B
Table B-6 . Estimated Acres of BLM Forestland with Old-Growth Characteristics Identified for Exchange in Future Transactions

Parcel Number	Estimated Acres by Basin			
	John Day	Umatilla	Grande Ronde	Powder
UM40		18		
UM41		30		
UM42		23		
UM43		60		
UM44		15		
UM45		55		
UM46		35		
B130				13
B138				10
B160				21
B162				2
B184				16
B193				36
B213				7
B227				7
B240				23
UN27			53	
UN65				12
UN68			17	
G118/120	145			
G124	50			
G128/130	69			
G130	40			
G128/131B	197			
G131C	197			
G116B	18			

Appendix B
Table B-6 . Estimated Acres of BLM Forestland with Old-Growth Characteristics Identified for Exchange in Future Transactions

Parcel Number	Estimated Acres by Basin			
	John Day	Umatilla	Grande Ronde	Powder
G117B/139A	220			
G139A	108			
G139B	243			
G145	47			
Acres with Old-Growth Characteristics	*1,334	236	*70	*147
Number of Parcels	11	7	2	10
Average Size (acres)	121	34	35	15
Range of Sizes (acres)	18 to 243	15 to 60	17 to 53	2 to 36
Total Acres with Old-Growth Characteristics for Future Transactions: 1,787 acres				

* Determination of old-growth characteristics on these acres is contingent on completion of wildlife surveys and clearance. The parcels associated with these totals have 4=stocking, which means (a) they are in size class 4 and have a 2 bar stocking, and (b) they have a minimum of 10 trees with diameter at breast height greater than 21 inches, and their crown closure is between 40 and 69 percent. These attributes are among the major ones associated with old-growth stands. Therefore, these stands are included in the total. However, since the presence of other old-growth attributes for these six stands is unknown, the final determination of old-growth, and likewise the acres, are subject to change.

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Appendix D - List of Preparers

Although many individuals at the resource area and district levels had primary responsibility for preparing certain sections of this EIS and plan maintenance, the document preparation was an interdisciplinary team effort. In addition, various resource specialists at the Baker Resource Area of the Vale BLM District, the Prineville BLM District, and the OR/WA BLM state office reviewed the analysis and provided information throughout the document preparation process. Contributions by individual preparers was subject to revision by other BLM specialists and management during the internal review process.

Name	Primary Responsibility	Discipline
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Scott Cooke	Wildlife Habitat Analysis and Threatened & Endangered Species	Wildlife Biologist
Mary D'Aversa	Soils and Hydrology	Hydrologist
Dennis Davis	Minerals Report	Geologist
Rick Demmer	Riparian/Wetland Areas	Resource Specialist
Ron Halvorson	Vegetation Analysis and Special Status Plant Species	Botanist
Ron Lane	Team Leader; Lands & Realty	Realty Specialist
Ken Primrose	Rangelands	Range Conservationist
Larry Thomas	Hazardous materials survey and reports	Hazardous Material Coordinator
Gary Torretta	Team Leader; Fisheries Habitat	Fishery Biologist
Bob Vidourek	Forestry & Timber	Forester
John Zancanella	Cultural & Paleontological Resources and Tribal Consultation	Archaeologist
Baker Resource Area, Vale BLM District		
Clair Button	Vegetation Analysis and Special Status Plant Species	Botanist
Steve Davidson	Team Leader; Lands & Realty	Realty Specialist
Dan Klug	Archaeology	Archaeologist
Matthias Kniesel	Wildlife and Riparian Habitat Threatened & Endangered Wildlife Species	Wildlife Biologist
Ralph Kuhns	Minerals, Geology and Paleontology	Geologist

Mark Lacy	Fisheries and Riparian Habitat	Fisheries Biologist
Dorothy Mason	Team Leader	Multi-Resource Staff Supervisor
Kevin McCoy	Recreation	Recreation Planner
Gene McLaughlin	Rangelands and Soils	Range Conservationist
Gerry Meyer	Recreation and Access	Recreation Planner
Mary Oman	Cultural & Paleontological Resources	Archaeologist
Larry Taylor	Rangelands	Supervisory Range Conservationist
Walt Wood	Forestry and Timber	Forester

Oregon/Washington BLM State Office (OSO) or Other Oregon BLM District

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Kathy Helm	Editorial Assistance	Technical Writer-Editor (Klamath Falls BLM Office)
Eric Stone	NEPA compliance and plan coordination	Program Analyst (OSO)

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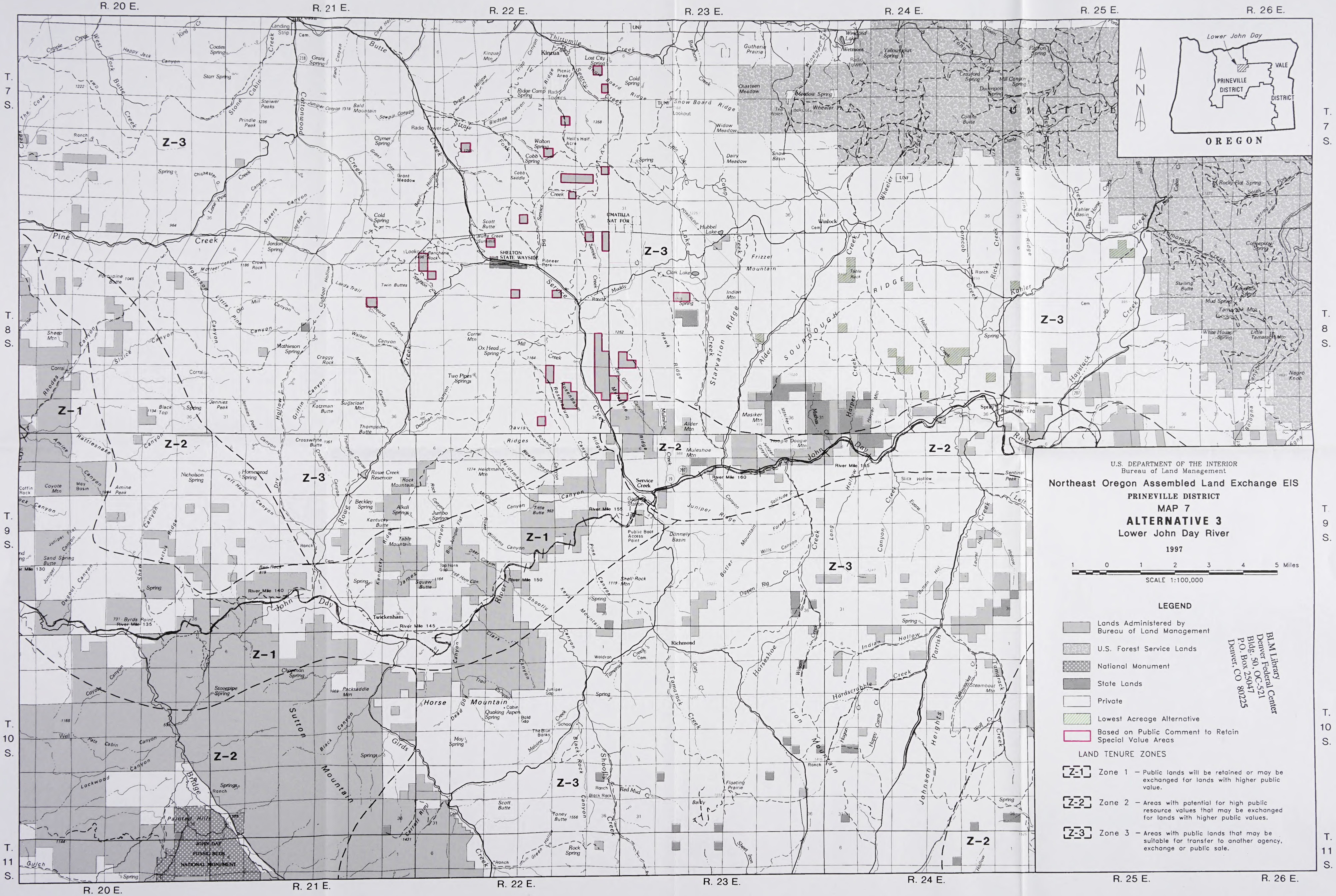

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Northeast Oregon Assembled Land Exchange EIS

PRINEVILLE DISTRICT

MAP 7

ALTERNATIVE 3

Lower John Day River

1997

1 0 1 2 3 4 5 Miles

SCALE 1:100,000

LEGEND

▨	Lands Administered by Bureau of Land Management
▨	U.S. Forest Service Lands
▨	National Monument
■	State Lands
□	Private
🟩	Lowest Acreage Alternative
🟥	Based on Public Comment to Retain Special Value Areas

LAND TENURE ZONES

Z-1 Zone 1 — Public lands will be retained or may be exchanged for lands with higher public value.

Z-2 Zone 2 — Areas with potential for high public resource values that may be exchanged for lands with higher public values.

Z-3 Zone 3 — Areas with public lands that may be suitable for transfer to another agency, exchange or public sale.

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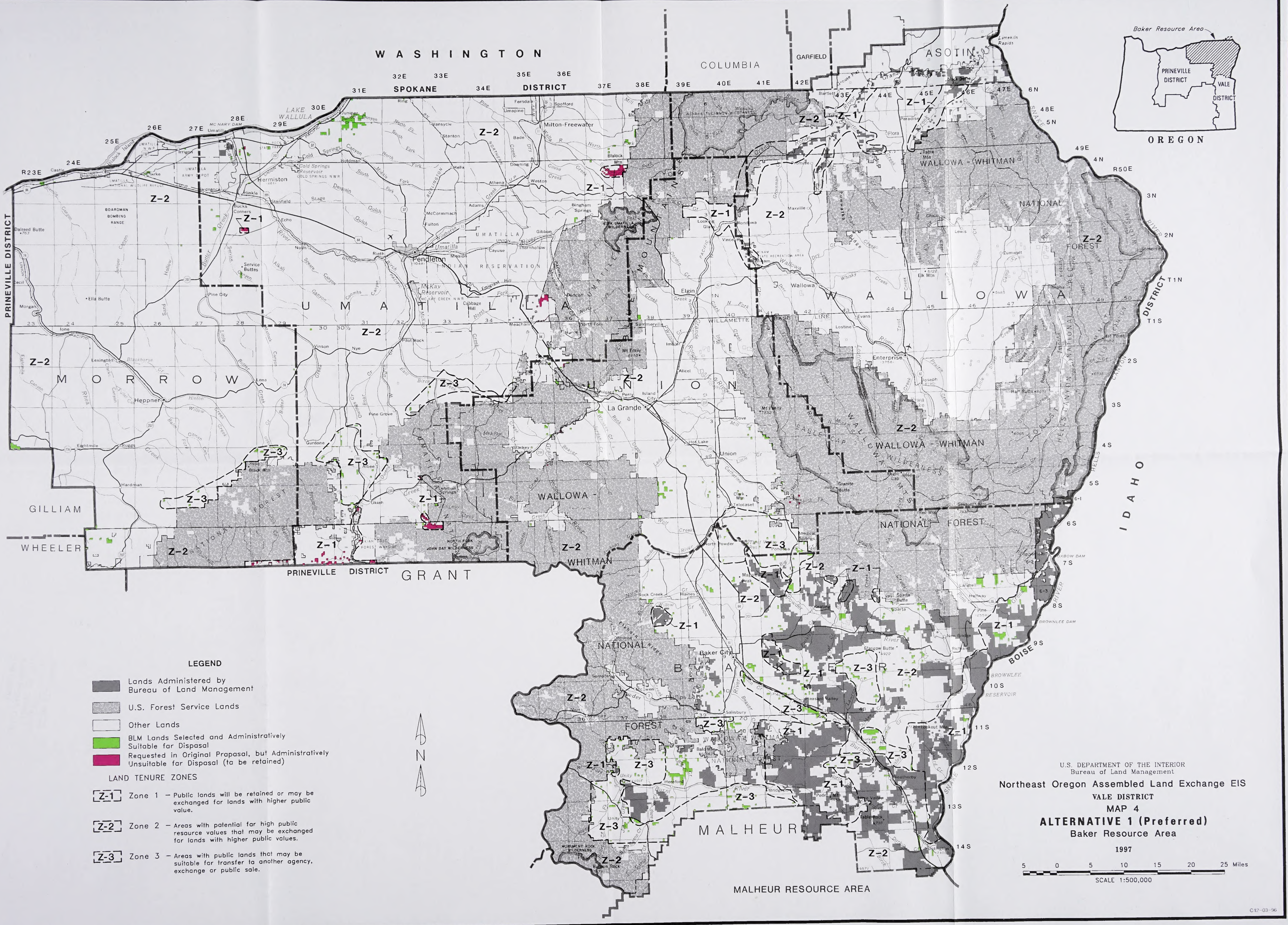

LEGEND

▆	Lands Administered by Bureau of Land Management
▒	U.S. Forest Service Lands
☐	Other Lands
🟩	BLM Lands Selected and Administratively Suitable far Dispasal
🟥	Requested in Original Prapasal, but Administratively Unsuitable far Dispasal (ta be retained)

LAND TENURE ZONES

- Z-1 Zone 1 – Public lands will be retained or may be exchanged far lands with higher public value.
- Z-2 Zone 2 – Areas with patential far high public resource values that may be exchanged far lands with higher public values.
- Z-3 Zone 3 – Areas with public lands that may be suitable far transfer ta another agency, exchange ar public sale.

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Northeast Oregon Assembled Land Exchange EIS

VALE DISTRICT

MAP 4
ALTERNATIVE 1 (Preferred)
Baker Resource Area

1997

5 0 5 10 15 20 25 Miles
SCALE 1:500,000

C12-03-96

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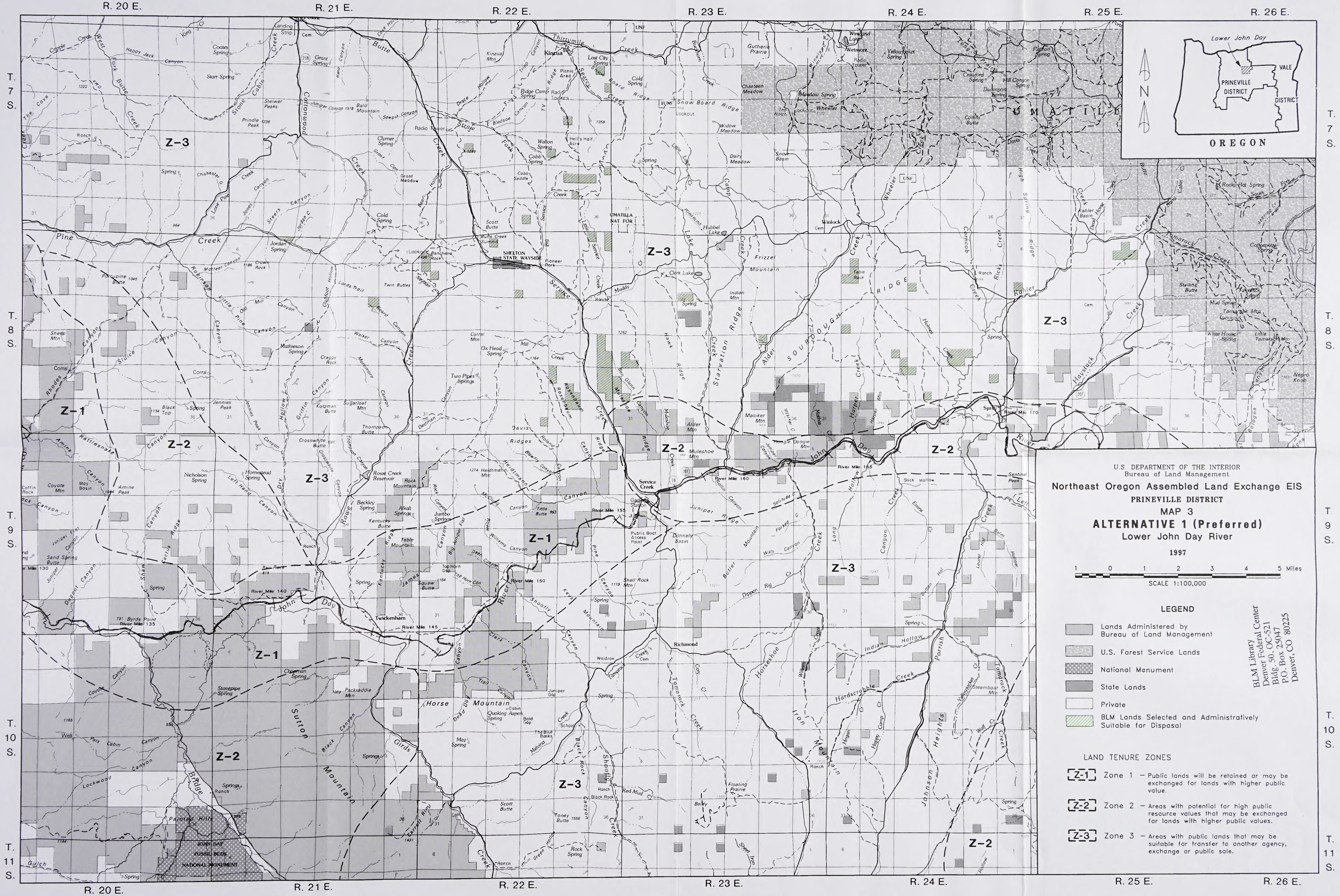

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Northeast Oregon Assembled Land Exchange EIS

PRINEVILLE DISTRICT

MAP 3

ALTERNATIVE 1 (Preferred)

Lower John Day River

1997

1 0 1 2 3 4 5 Miles
SCALE 1:100,000

LEGEND

▨ Lands Administered by Bureau of Land Management

▨ U.S. Forest Service Lands

▨ National Monument

▨ State Lands

☐ Private

▨ BLM Lands Selected and Administratively Suitable for Disposal

LAND TENURE ZONES

Z-1 Zone 1 – Public lands will be retained or may be exchanged for lands with higher public value.

Z-2 Zone 2 – Areas with potential for high public resource values that may be exchanged for lands with higher public values.

Z-3 Zone 3 – Areas with public lands that may be suitable for transfer to another agency, exchange or public sale.

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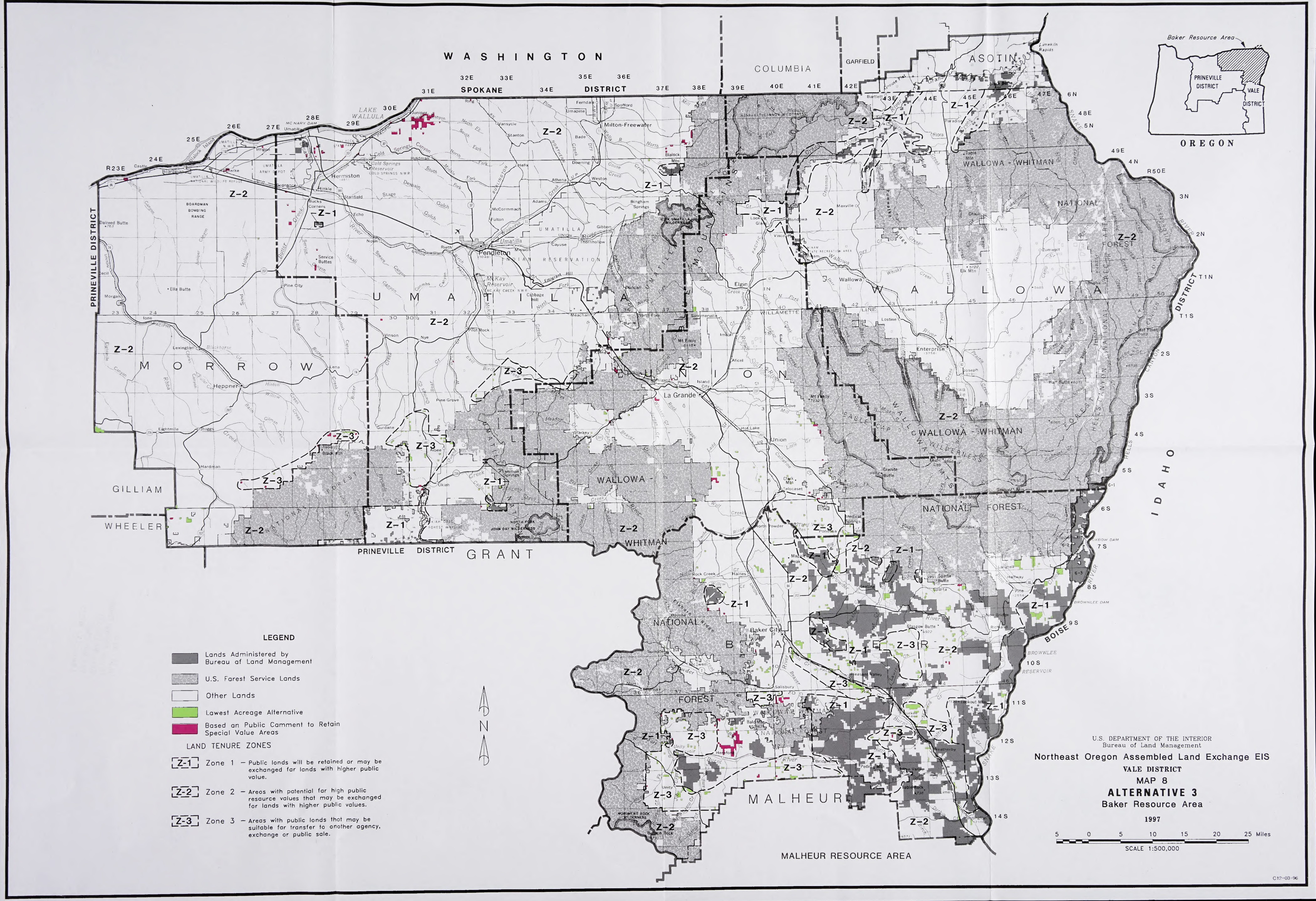


LEGEND

▇	Lands Administered by Bureau of Land Management
▒	U.S. Forest Service Lands
☐	Other Lands
🟩	Lowest Acreage Alternative
🟥	Based on Public Comment to Retain Special Value Areas

LAND TENURE ZONES

Z-1	Zone 1 — Public lands will be retained or may be exchanged for lands with higher public value.
Z-2	Zone 2 — Areas with potential for high public resource values that may be exchanged for lands with higher public values.
Z-3	Zone 3 — Areas with public lands that may be suitable for transfer to another agency, exchange or public sale.

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Northeast Oregon Assembled Land Exchange EIS

VALE DISTRICT

MAP 8

ALTERNATIVE 3

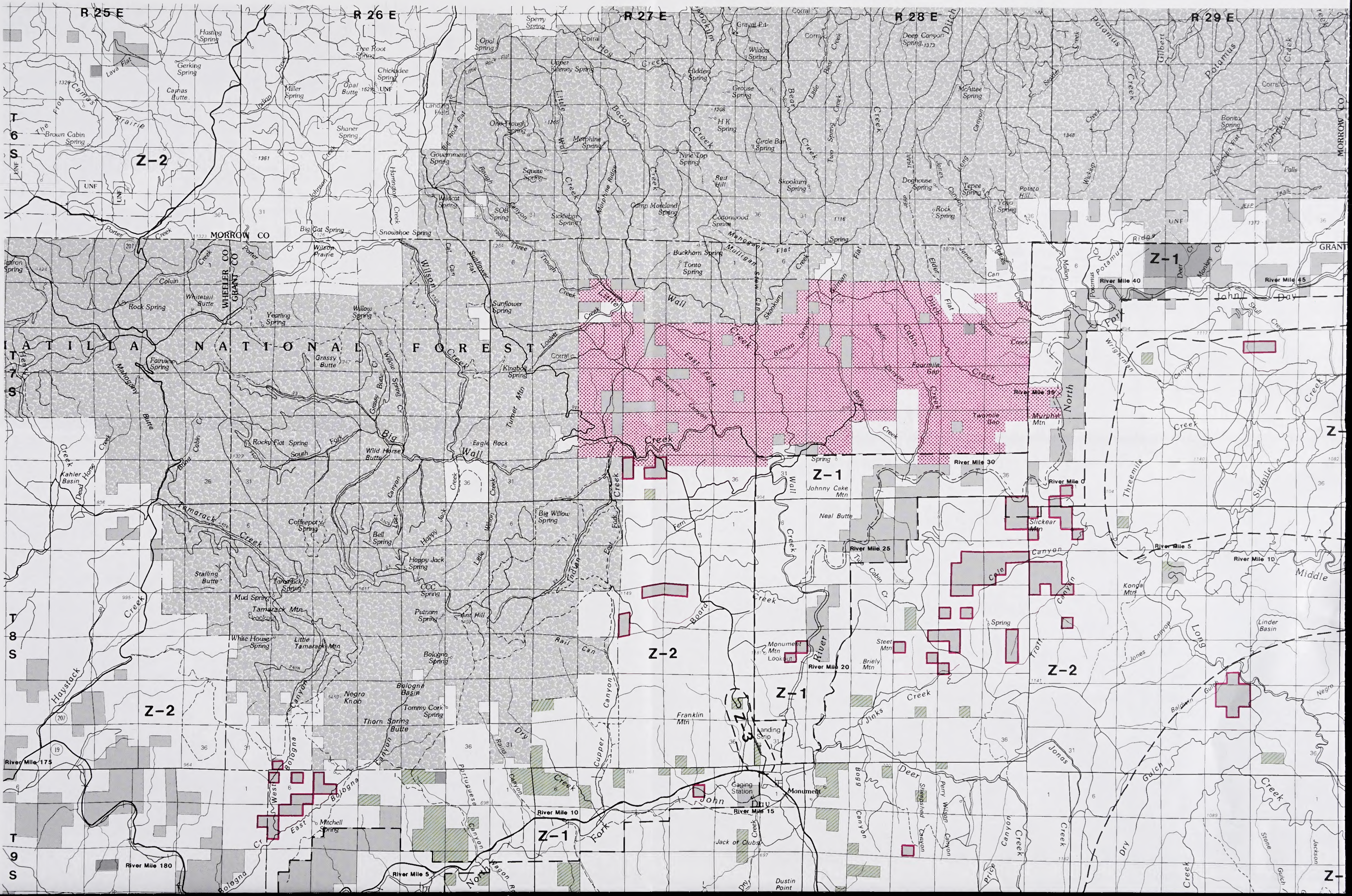
Baker Resource Area

1997

5 0 5 10 15 20 25 Miles

SCALE 1:500,000

C12-03-96


R 25 E
R 26 E
R 27 E
R 28 E
R 29 E
T 6 S
T 7 S
T 8 S
T 9 S
Z–2
Z–1
Z–3
UMATILLA NATIONAL FOREST
MORROW CO
WHEELER CO
GRANT CO
GRANT
MORROW CO
UNF
Camas Prairie
Brown Cabin Spring
Lava Flat
Gerking Spring
Camas Butte
Hasting Spring
Miller Spring
Three Root Spring
Chickadee Spring
Opal Butte
Shaner Spring
Sperry Spring
Opal Spring
Upper Keeney Spring
One Trough Spring
Government Spring
Morphine Spring
Squaw Spring
SOB Spring
Wildcat Spring
Sickfoot Spring
Camp Moreland Spring
Gravel Pit
Wildcat Spring
Hidden Spring
Grouse Spring
H K Spring
Circle Bar Spring
Nine Top Spring
Red Hill
Skookum Spring
Cottonwood Spring
Deep Canyon Spring
McAttee Spring
Doghouse Spring
Tepee Spring
Rock Spring
Yoyo Spring
Potato Hill
Bonita Spring
Big Cat Spring
Snowshoe Spring
Wilson Prairie
Buckhorn Spring
Tonto Spring
Colvin
Rock Spring
Whitetail Butte
Yearling Spring
Willow Spring
Sunflower Spring
Grassy Butte
Kingbolt Spring
Fairview Spring
Rocky Flat Spring
Wild Horse Butte
Eagle Rock
Big Wall
Kahler Basin
Coffeepot Spring
Bell Spring
Happy Jack
Hoppy Jack Spring
Big Willow Spring
Stalling Butte
Tamarack Spring
Mud Spring
CCC Spring
Tamarack Mtn Lookout
Putnam Spring
Ant Hill
White House Spring
Little Tamarack Mtn
Bologna Spring
Bologne Basin
Negro Knob
Tommy Cork Spring
Thorn Spring Butte
Mitchell Spring
Haystack
River Mile 175
River Mile 180
River Mile 5
River Mile 10
River Mile 15
River Mile 20
River Mile 25
River Mile 30
River Mile 35
River Mile 40
River Mile 45
River Mile 0
River Mile 5
River Mile 10
Johnny Cake Mtn
Neal Butte
Foormile Gap
Twomile Gap
Murphy Mtn
Slickear Mtn
Cole Canyon
Konga Mtn
Linder Basin
Monument Mtn Lookout
Steet Mtn
Briely Mtn
Franklin Mtn
Landing Strip
Gaging Station
Monument
Jack of Clubs
Dustin Point
John Day
North Fork
Middle
Wall Creek
Little Wall Creek
Big Creek
Tamarack Creek
Rail Can
Indian Creek
Cupper Canyon
Board Creek
Jinks Creek
Deer Creek
Threemile
Sixmile
Long Creek
Jones Canyon
Baldwin Gulch
Stone Gulch
Dry Gulch
Mallory Cr
Wrightman Canyon
Potamus Creek
Ditch Creek
Skookum Creek
Bacon Creek
Hog Creek
Negro
Wagon Road

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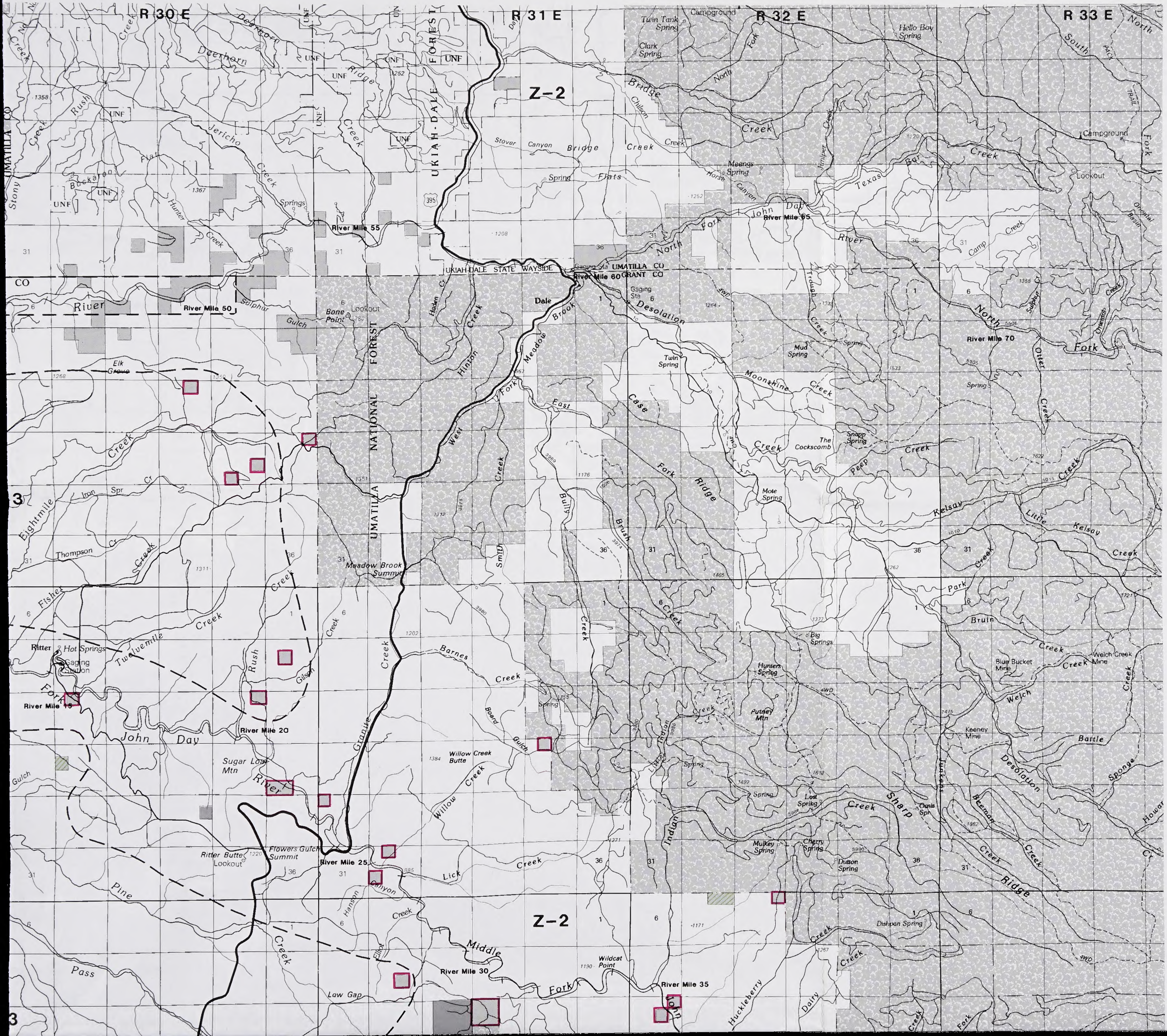

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Northeast Oregon Assembled Land Exchange EIS

PRINEVILLE DISTRICT

MAP 5

ALTERNATIVE 3

North Half - Upper John Day River

1997

1 0 1 2 3 4 5 Miles

SCALE 1:100,000

LEGEND

▨	Lands Administered by Bureau of Land Management
▨	U.S. Forest Service Lands
▨	National Monument
■	State Lands
☐	Private
▨	Lowest Acreage Alternative
☐	Based on Public Comment to Retain Special Value Areas
▨	BLM Acquired

LAND TENURE ZONES

Z-1	Zone 1	— Public lands will be retained or may be exchanged for lands with higher public value.
Z-2	Zone 2	— Areas with potential for high public resource values that may be exchanged for lands with higher public values.
Z-3	Zone 3	— Areas with public lands that may be suitable for transfer to another agency, exchange or public sale.

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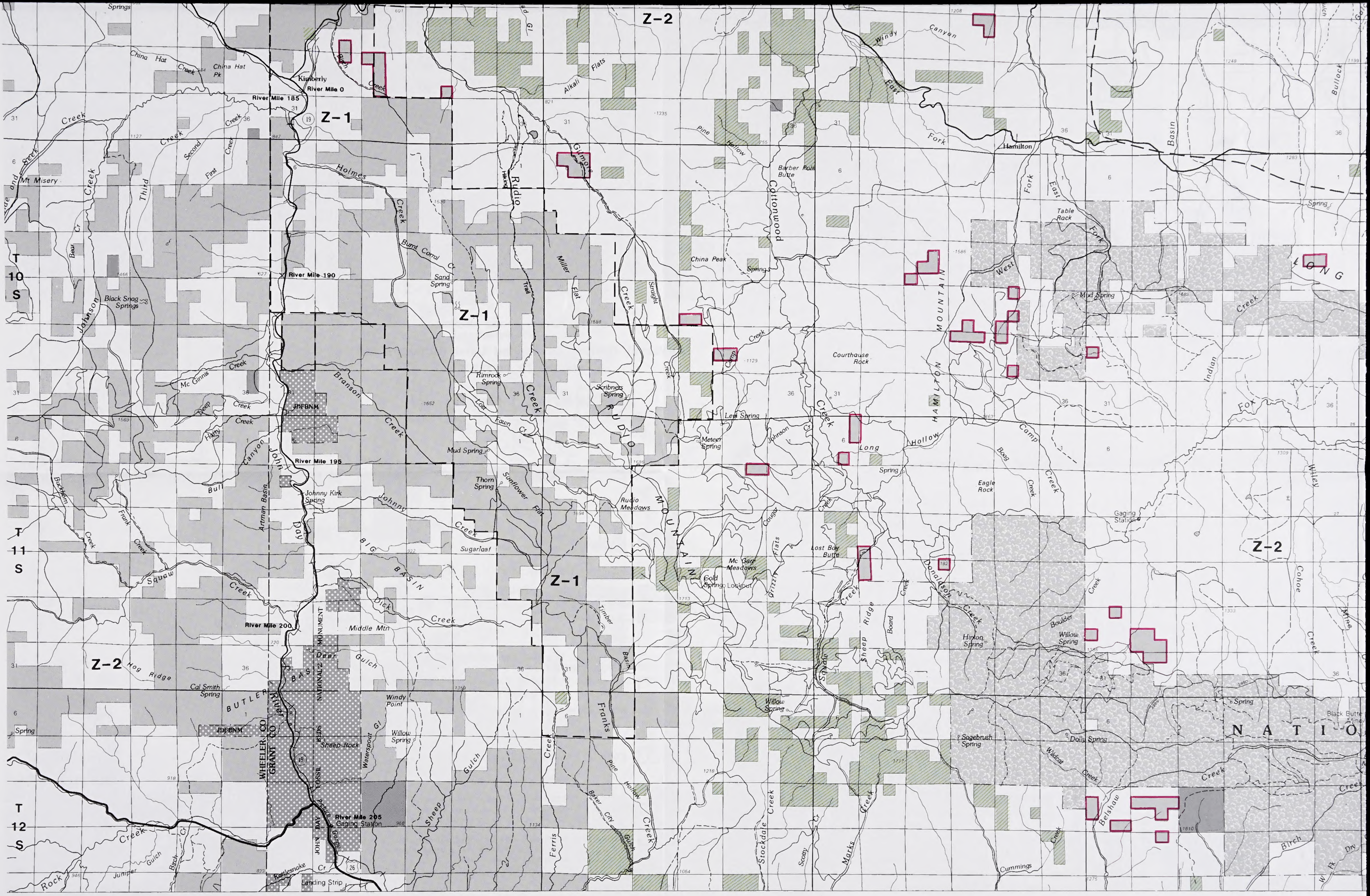
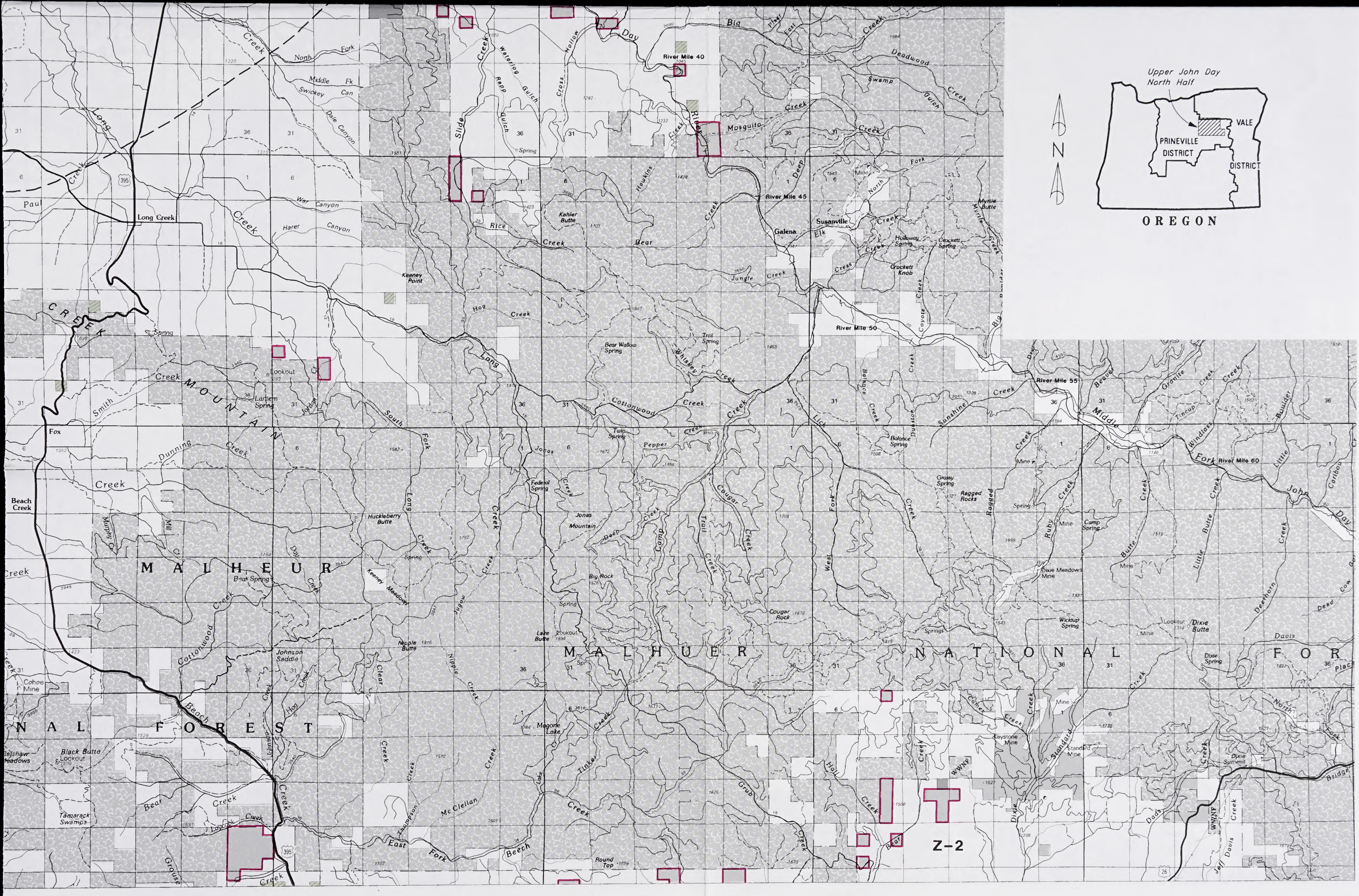
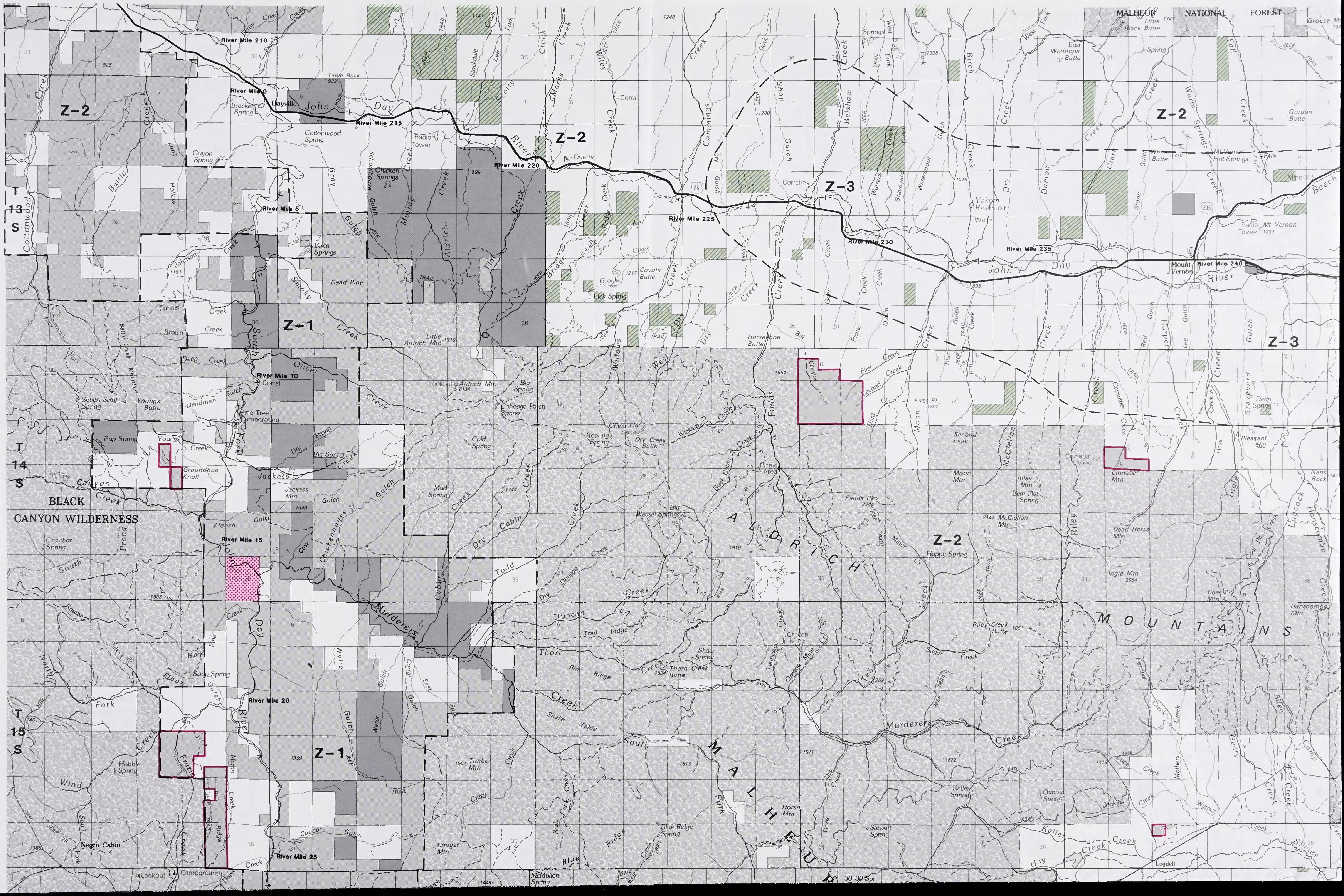
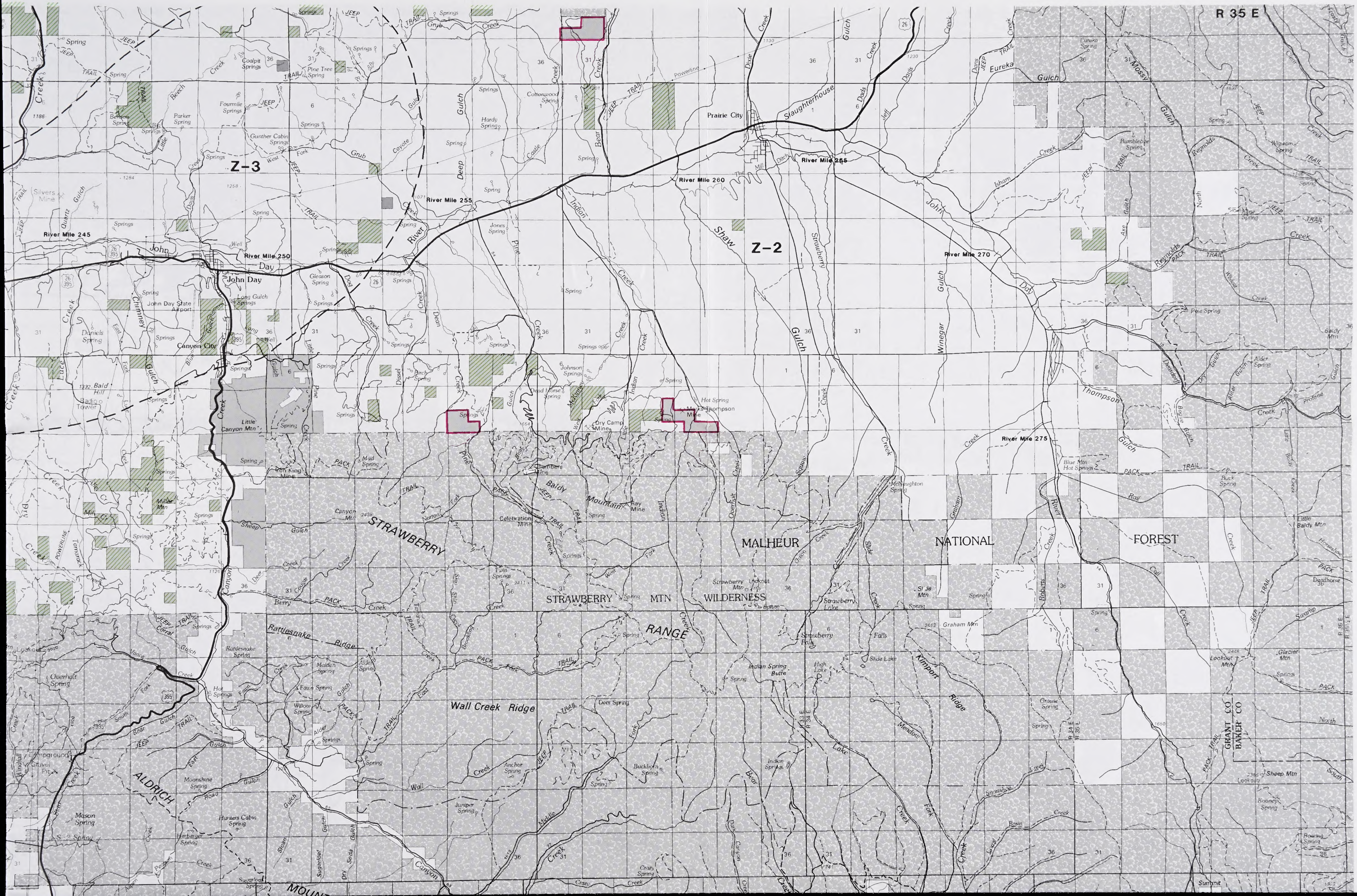
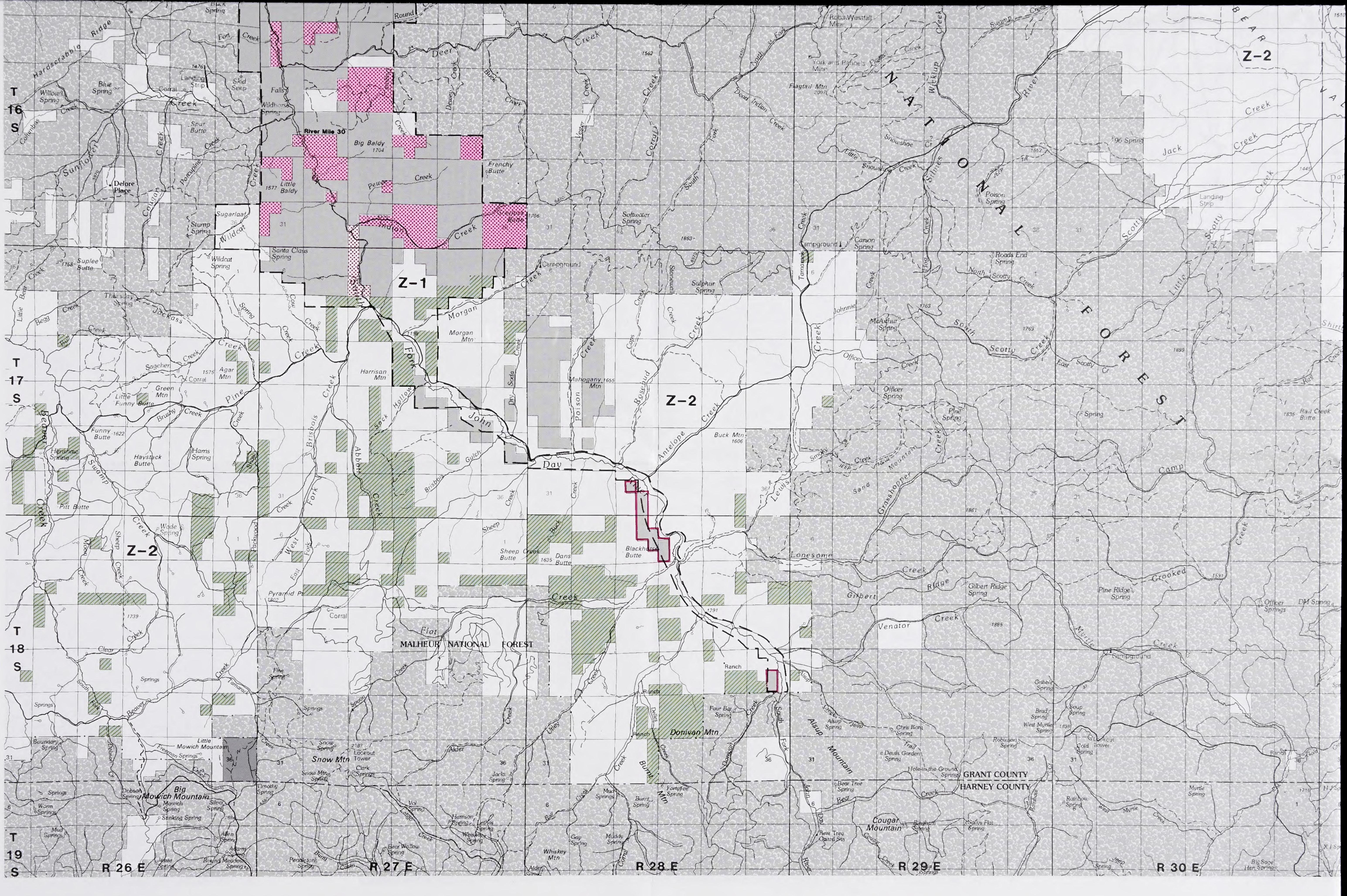

Z-2
Z-1
Z-1
Z-1
Z-2
Z-2
T 10 S
T 11 S
T 12 S
Kimberly
River Mile 0
River Mile 185
River Mile 190
River Mile 195
River Mile 200
River Mile 205
Gaging Station
China Hat
China Hat Pk
Mt Misery
Black Snag Springs
Johnson Creek
Mc Ginnis
Holmes Creek
Burnt Corral Cr
Sand Spring
Rudio Creek
Hiking Trail
Gilmore
Alkali Flats
Pine Hollow
Barber Pole Butte
Cottonwood
China Peak
Windy
Canyon
East Fork
Hamilton
Basin
Bullock
Table Rock
West Fork
Mud Spring
Long
Creek
Courthouse Rock
Hamilton Mountain
Indian
Fox
Miller Flat
Straight Creek
Camp Creek
Scribners Spring
Rudio Mountain
Len Spring
Meteer Spring
Long Hollow
Bog Creek
Eagle Rock
Wiley
Gaging Station
Rimrock Spring
Lost Fawn Cr
Branson Creek
JDFBNM
Mud Spring
Thorn Spring
Sunflower Flat
Johnny Kirk Spring
Johnny Creek
Sugarloaf
Big Basin
Rudio Meadows
Cougar
Flats
Lost Boy Butte
Mc Garr Meadows
Cold Spring Lookout
Grizzly
Donaldson Creek
Cohoe
Timber Basin
Dick Creek
Middle Mtn
Deer Gulch
Hinton Spring
Boulder Creek
Willow Spring
Sheep Ridge
Board
Squaw Creek
Frank Creek
Artman Basin
Bull Canyon
Buckhorn
Hog Ridge
Cal Smith Spring
Butler Basin
John Day River
Wheeler Co
Grant Co
National Monument
Fossil Beds
Windy Point
Willow Spring
Sheep Rock
Waterspout Gl
Picture Gorge
Franks Creek
Willow Spring
Spring
Black Butte Mine
Nation
Sagebrush Spring
Dolly Spring
Wildcat Creek
Belshaw
Birch
Sheep Gulch
Ferris Creek
Pine Hollow
Baker City Gulch
Stockdale Creek
Scotty Cr
Marks Creek
Cummings
Rattlesnake Cr
Landing Strip
Rock
Juniper Gulch
Birch Cr
Creek
Spring

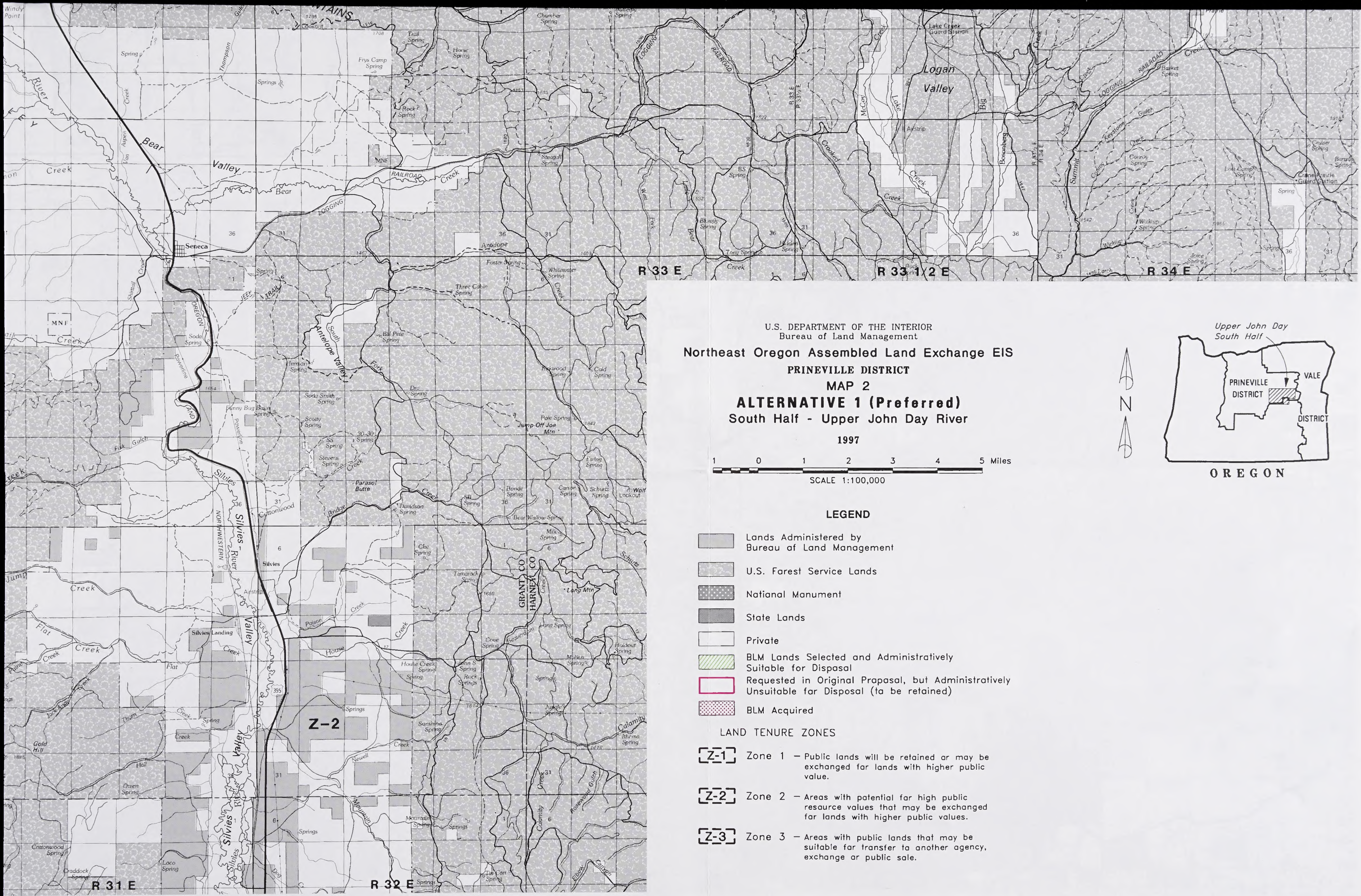


Upper John Day North Half
VALE
PRINEVILLE DISTRICT
DISTRICT
OREGON
N
Z-2
MALHEUR
MALHEUR NATIONAL FOR
NAL FOREST
CREEK MOUNTAIN
River Mile 40
River Mile 45
River Mile 50
River Mile 55
River Mile 60
Long Creek
Fox
Beach Creek
Galena
Susanville
Cohoe Mine
Black Butte Lookout
Belshaw Meadows
Tamarack Swamps
Keeney Point
Kahler Butte
Bear Wallow Spring
Trail Spring
Twin Spring
Federal Spring
Jonas Mountain
Big Rock
Huckleberry Butte
Keeney Meadows
Bear Spring
Johnson Saddle
Nipple Butte
Lake Butte
Lookout
Magone Lake
Round Top
Cougar Rock
Balance Spring
Grassy Spring
Ragged Rocks
Camp Spring
Dixie Meadows Mine
Wickiup Spring
Dixie Butte
Dixie Spring
Dixie Summit
Keystone Mine
Standard Mine
Holloway Spring
Crockett Spring
Crockett Knob
Myrtle Butte
Lartem Spring
Middle Fork John Day
North Fork
Big Creek
Deadwood Creek
Swamp Gulch
Mosquito Creek
Slide Creek
Waterlog Gulch
Cross Hollow
Rice Creek
Bear Creek
Hawkins Creek
Jungle Creek
Elk Creek
Hog Creek
Long Creek
Whiskey Creek
Cottonwood Creek
Pepper Creek
Cougar Creek
Trail Creek
Camp Creek
Deep Creek
West Fork
Lick Creek
Balance Creek
Dunston Creek
Sunshine Creek
Beaver Creek
Granite Creek
Tincup Creek
Windlass Creek
Little Boulder Creek
Caribou Creek
Ruby Creek
Ragged Creek
Butte Creek
Little Butte Creek
Deerhorn Creek
Dead Cow Gulch
Davis Creek
Placer
Smith Creek
Dunning Creek
Murphy Cr
Mill Creek
Cottonwood Creek
Clear Creek
Nipple Creek
Jungle Creek
Tinker Creek
Grub Creek
Thompson Creek
McClellan Creek
East Fork Beach Creek
Beach Creek
Laycock Creek
Grouse Creek
Bear Creek
Hall Creek
Bear Creek
Dads Creek
Dixie Creek
Standard Creek
Comer Creek
Jeff Davis Creek
Bridge Creek
WWNF
395
26


MALHEUR NATIONAL FOREST
Z-1
Z-2
Z-3
T 13 S
T 14 S
T 15 S
BLACK CANYON WILDERNESS
ALDRICH MOUNTAINS
SOUTH FORK MALHEUR
River Mile 210
River Mile 215
River Mile 220
River Mile 225
River Mile 230
River Mile 235
River Mile 240
River Mile 0
River Mile 5
River Mile 10
River Mile 15
River Mile 20
River Mile 25
Dayville
Mount Vernon
John Day River
South Fork John Day River
Murderers Creek
Table Rock
Bracket Spring
Cottonwood Spring
Guyon Spring
Radio Tower
Chicken Springs
Birch Springs
Dead Pine
Little Aldrich Mtn
Lookout Aldrich Mtn
Big Spring
Cabbage Patch Spring
Cold Spring
Mud Spring
Pine Tree Campground
Jackass Mtn
Big Spring
Pup Spring
Groundhog Knoll
Seven Stay Spring
Youngs Butte
Crowbar Spring
Soup Spring
Hobble Spring
Negro Cabin
Lookout
Campground
Cougar Mtn
Timber Mtn
McMullen Spring
Blue Ridge Spring
Horse Mtn
Stewart Spring
Keller Spring
Oxbow Spring
Logdell
30-30 Spr
Coyote Butte
Lick Spring
Horseshoe Butte
Quarry
Corral
Yokum Reservoir
Wells
White Butte
Mt Vernon Hot Springs
Radio Tower
Mt Vernon
Gordon Butte
East Wolfinger Butte
Little Black Butte
Grouse Mtn
China Hat Spring
Roaning Spring
Dry Creek Butte
Weasel Springs
Fields Pk
Second Peak
First Pk
Moon Mtn
Riley Mtn
Bear Flat Spring
McClellan Mtn
Happy Spring
Cinnabar Mtn
Dead Horse Mtn
Ingle Mtn
Coal Pit Mtn
Hanscombe Mtn
Nans Rock
Pleasant Hill
Dean Spring
Riley Creek Butte
Shaw Spring
Thorn Creek Butte
Oregon Mine
Big Ridge
Shake Table
Duncan Trail Ridge
Todd
Aldrich
Deadman Gulch
Black Canyon Creek
Wind Creek
Fraser Creek
Cottonwood Creek
Battle Creek
Smoky Creek
Murray Creek
Aldrich Creek
Flat Creek
Belshaw Creek
Dry Creek
Riley Creek
Laycock Creek
Hay Creek
Keller Creek


R 35 E
Z-3
Z-2
River Mile 245
River Mile 250
River Mile 255
River Mile 260
River Mile 265
River Mile 270
River Mile 275
John Day
Canyon City
Prairie City
John Day State Airport
Little Canyon Mtn
Bald Hill
Radio Tower
Silvers Mine
Slaughterhouse Gulch
Strawberry
Shaw Gulch
Winegar Gulch
Indian Creek
Pine Creek
Dixie Creek
Dads Creek
Bear Creek
Deep Gulch
Grub Gulch
Coyote Gulch
Canyon Creek
Dry Camp Mine
Hot Spring
Magnet Thompson Mine
Chambers Mine
Baldy Mountain
Ray Mine
Celebration Mine
Iron King Mine
Canyon Mtn
STRAWBERRY
STRAWBERRY MTN WILDERNESS
RANGE
MALHEUR
NATIONAL
FOREST
Strawberry Mtn
Lookout
Strawberry Lake
Strawberry Falls
Slide Lake
High Lake
Indian Spring Butte
Kimport Ridge
Graham Mtn
Slide Mtn
Rattlesnake Ridge
Wall Creek Ridge
ALDRICH
Campground
Gravel Pit
Mason Spring
Overholt Spring
Moonshine Spring
Hunters Cabin Spring
Deer Spring
Juniper Spring
Anchor Spring
Buckhorn Spring
Crazy Spring
Sugarloaf
MOUN
Blue Mtn Hot Springs
McNaughton Spring
Thompson Gulch
Little Baldy Mtn
Baldy Mtn
Glacier Mtn
Lookout Mtn
Sheep Mtn
Lookout
GRANT CO
BAKER CO
R 34 E
R 35 E
R 36 E
Summit
Eureka Gulch
Mossy Gulch
Reynolds Creek
Isham Creek
Pete Spring
Alder Spring
Buck Spring
Deadhorse
Rail Creek
Call Creek
Powerline
JEEP
TRAIL
PACK
26
395
36
31
6
1


Z-1
Z-2
Z-2
Z-2
Z-2
MALHEUR NATIONAL FOREST
NATIONAL FOREST
GRANT COUNTY
HARNEY COUNTY
T 16 S
T 17 S
T 18 S
T 19 S
R 26 E
R 27 E
R 28 E
R 29 E
R 30 E
River Mile 30
Big Baldy 1704
Little Baldy 1577
Frenchy Butte
Graylock Butte
Sugarloaf
Stump Spring
Wildcat
Wildcat Spring
Santa Claus Spring
Suplee Butte
Thursday Spring
Jackass
Hardscrabble Ridge
Blue Spring
Willow Spring
Landing Strip
Skid Spring
Falls
Wildhorse Spring
Spur Butte
Delore Place
Sunflower
Porcupine Creek
Cougar Creek
Columbus
Fort Creek
Round
Deer Creek
Dewey Creek
Buck Creek
Pewee Creek
Indian Creek
Vester Creek
Corral Creek
South Fork
Softwater Spring
Campground
Sulphur Spring
Stonewall Creek
Roba Westfall Mine
York and Rahnels Mine
Flagtail Mtn 2007
Flagtail Creek
Dead Indian Creek
Wickiup Creek
Snowshoe Cr
Little Snowshoe Creek
Sillimes Creek
Swamp Creek
River
Poison Spring
Carson Spring
Campground
Tamarack Creek
Roads End Spring
North Scotty Creek
South Scotty Creek
East Scotty Cr
Little Scotty Creek
Scotty Creek
96 Spring
Jack Creek
Landing Strip
McArthur Spring
Johnnie Creek
Officer
Officer Spring
Pine Spring
Spring
Rail Creek Butte
Rail Creek
Shirtt
Camp Creek
Smoky Creek
Sand Mountain
Grasshopper
Little Beaver Creek
Begg Creek
Pine Creek
Sageher Creek
Agar Mtn
Corral
Green Mtn
Little Funny Butte
Funny Butte 1622
Brushy Creek
Haystack Butte
Hams Spring
Henshaw Spring
Beaver Creek
Swamp Creek
Pitt Butte
Wade Spring
Moon Creek
Sheep Creek
Rockwood
West Fork
East Fork
Pyramid Pt 1802
Corral
Clear Creek
Springs
Tamarack
Beaver
South Fork
Springs
Boundary Spring
Little Mowich Mountain
Freeman Springs
Big Mowich Mountain
Dobson Spring
Mowich Spring
Stinking Spring
Silver Spring
Allen Spring
Adams Spring
Round Meadow Spring
Jessie Spring
Worm Springs
Mud Springs
Springs
Spring Creek
Cow Creek
Morgan Creek
Morgan Mtn
Harrison Mtn
Fork
Hollow
Buck Hollow
John
Day
Brisbois Creek
Abbott Creek
Brisbois Gulch
Sheep Creek
Sheep Creek Butte
Dans Butte 1635
Soda Creek
Dry Creek
Mahogany Mtn 1655
Poison Creek
Rosebud Creek
Cabin Creek
Antelope Creek
Buck Mtn 1606
Blackhorse Butte
Lewis Creek
Lonesome
Gilbert Creek
Ridge
Gilbert Ridge Spring
Pine Ridge Spring
Crooked
Officer Springs
DM Spring
Venator Creek
Myrtle Creek
Campground
Flat
Fine Spring
Spoon
Springs
Snow Spring
Snow Mtn
Lookout Tower
Snow Mtn Spring
Clark Springs
Timothy Spring
Alder
Jacks Spring
Utley Creek
Ranch
Ranch
Ranch
Donivan Mtn
Delles
Four Bar Spring
Creek
Alsup
Alsup Mountain
Alsup Spring
Chris Borg Spring
Devils Garden Spring
Hole-in-the-Ground Springs
Robinson Spring
Brad Spring
West Myrtle Spring
Soup Spring
Cold Spring
Lookout Tower
Gribble Spring
Trail
Jeep
Myrtle Spring
Rainbow Spring
West Myrtle
Bear Tree Spring
Bear Creek
Cougar Mountain
Bingham Spring
Sulpho Flat Spring
Bear Tree Guard Sta
Fortyfive Spring
Burnt Mtn
Burnt Springs
Mud Springs
Gay Spring
Muddy Spring
Whiskey Mtn
Alder Spring
Vol Spring
Harrison Spring
Lottos Spring
Whiskey Spring
Bear Wallow Spring
Pendleton Spring
Burnt Cabin
Corral
Big Sage Hen Spring
Spring
BEAR VAL
Ranch
Hollow



U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Northeast Oregon Assembled Land Exchange EIS

PRINEVILLE DISTRICT

MAP 2

ALTERNATIVE 1 (Preferred)

South Half - Upper John Day River

1997

1 0 1 2 3 4 5 Miles

SCALE 1:100,000

LEGEND

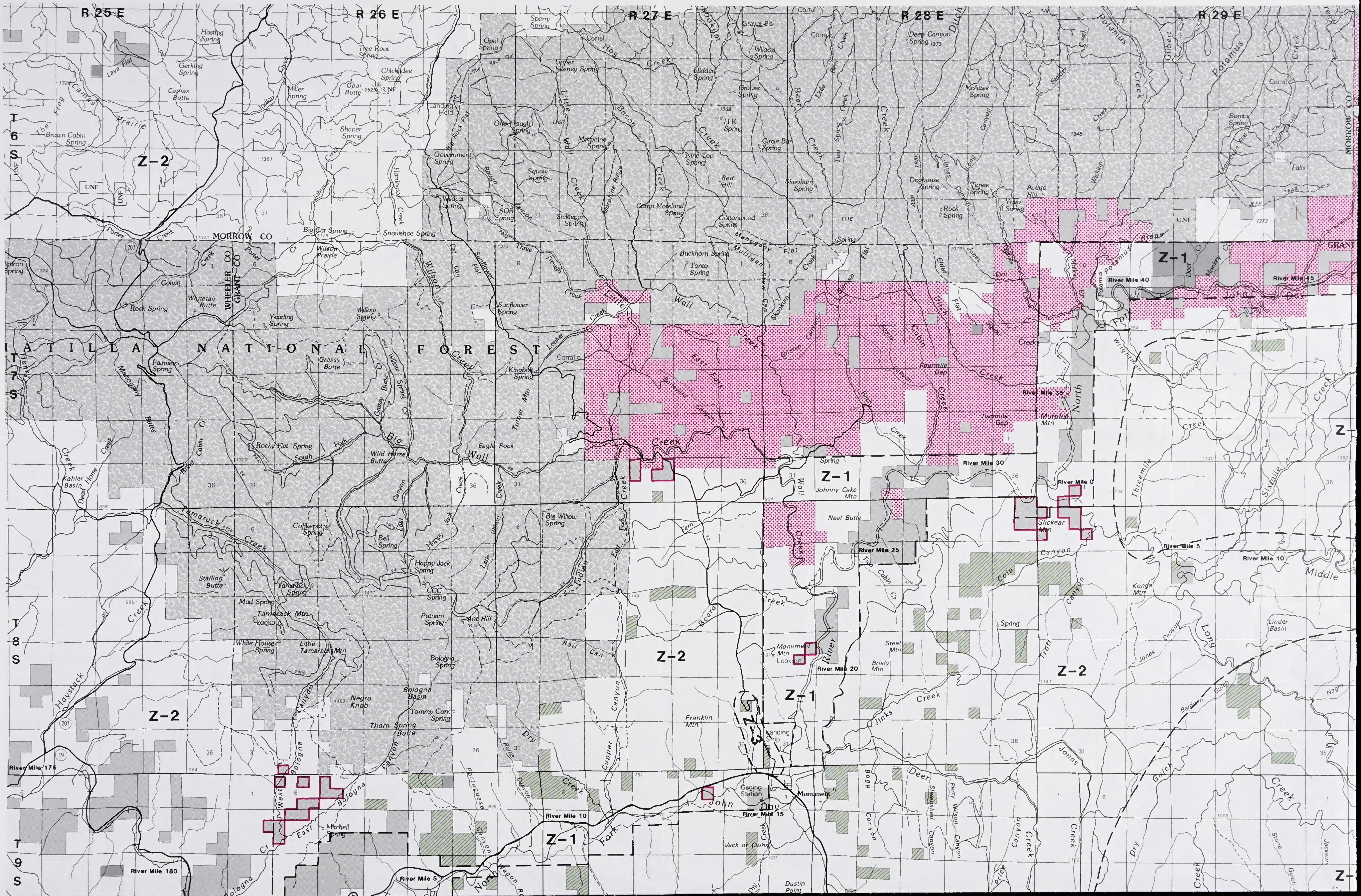
- ▨ Lands Administered by Bureau of Land Management
- ▨ U.S. Forest Service Lands
- ▨ National Monument
- ▨ State Lands
- ☐ Private
- ▨ BLM Lands Selected and Administratively Suitable for Disposal
- ☐ Requested in Original Proposal, but Administratively Unsuitable for Disposal (to be retained)
- ▨ BLM Acquired

LAND TENURE ZONES

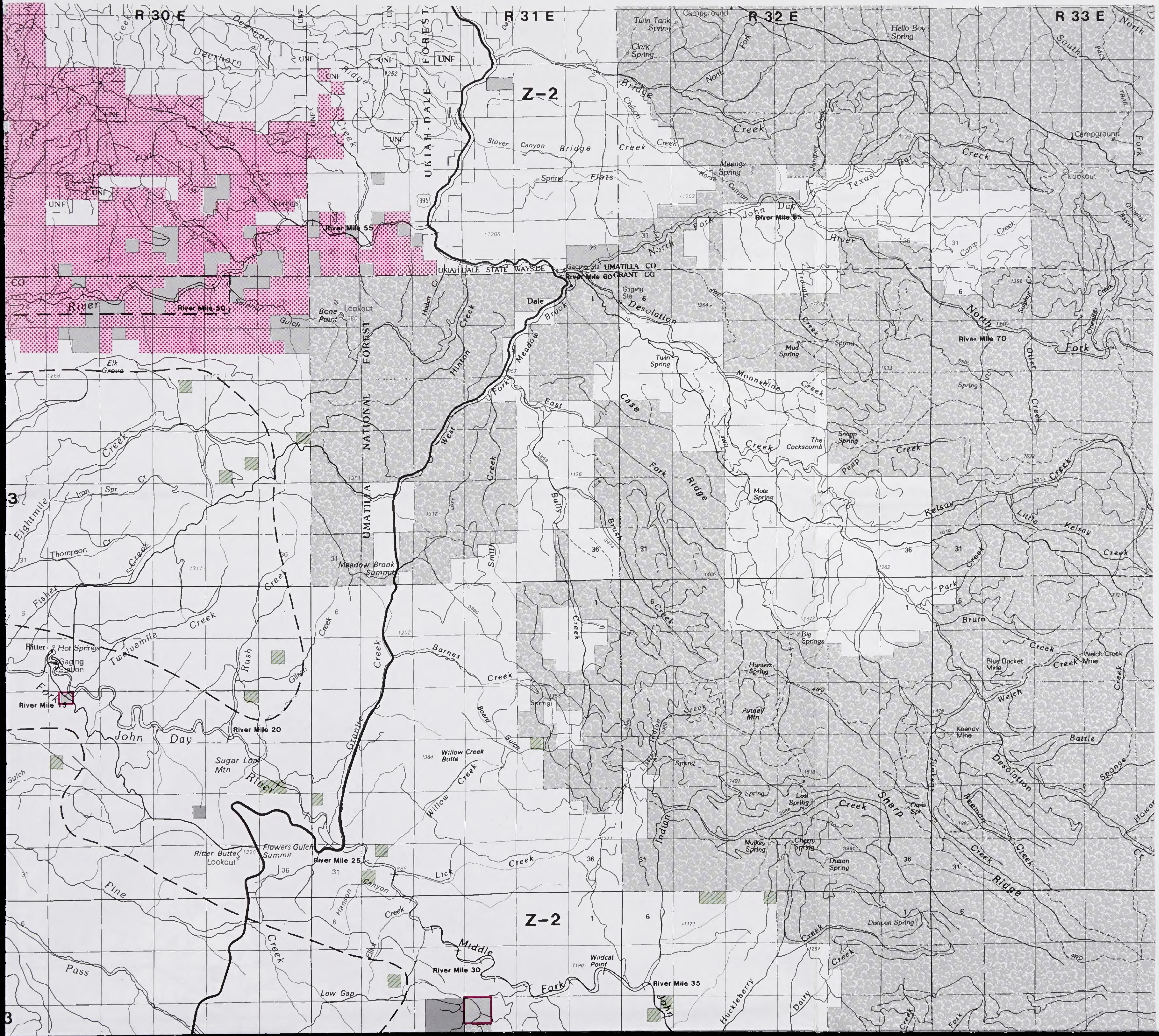
Z-1 Zone 1 – Public lands will be retained or may be exchanged for lands with higher public value.

Z-2 Zone 2 – Areas with potential for high public resource values that may be exchanged for lands with higher public values.

Z-3 Zone 3 – Areas with public lands that may be suitable for transfer to another agency, exchange or public sale.


R 25 E
R 26 E
R 27 E
R 28 E
R 29 E
T 6 S
T 7 S
T 8 S
T 9 S
Z–2
Z–1
Z–3
UMATILLA NATIONAL FOREST
MORROW CO
WHEELER CO
GRANT CO
UNF
River Mile 0
River Mile 5
River Mile 10
River Mile 15
River Mile 20
River Mile 25
River Mile 30
River Mile 35
River Mile 40
River Mile 45
River Mile 175
River Mile 180
Monument
Gaging Station
Landing Strip
Monument Mtn Lookout
Franklin Mtn
Johnny Cake Mtn
Neal Butte
Slickear Mtn
Murphy Mtn
Kahler Basin
Tamarack Mtn Lookout
Little Tamarack Mtn
Negro Knob
Bologna Basin
Thorn Spring Butte
Stalling Butte
Grassy Butte
Wild Horse Butte
Eagle Rock
Turner Mtn
Fairview Spring
Rock Spring
Whitetail Butte
Yearling Spring
Wilson Prairie
Big Cat Spring
Snowshoe Spring
Camas Butte
Lava Flat
Brown Cabin Spring
Wall Creek
Big Wall
Little Wall Creek
Skookum Creek
Potamus Creek
Ditch Creek
Bacon Creek
Hog Creek
Mahogany Flat
Buckhorn Spring
Tonto Spring
North Fork
John Day River
Jack of Clubs
Dustin Point
Mitchell Spring
Haystack
Threemile
Sixmile
Middle
Konga Mtn
Linder Basin
Steet Mtn
Briely Mtn
Jinks Creek
Deer Creek
Long Creek
Dry Gulch
Jonas Creek
Potato Hill
Tepee Spring
Rock Spring
Doghouse Spring
Deep Canyon Spring
Gilbert Creek
Bonita Spring

#42899987 ID: 88067197 HD243.07 N6784 1997 v.2



Northeast Oregon Assembled Land Exchange EIS

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

PRINEVILLE DISTRICT

MAP 1

ALTERNATIVE 1 (Preferred)

North Half - Upper John Day River

1997

1 0 1 2 3 4 5 Miles

SCALE 1:100,000

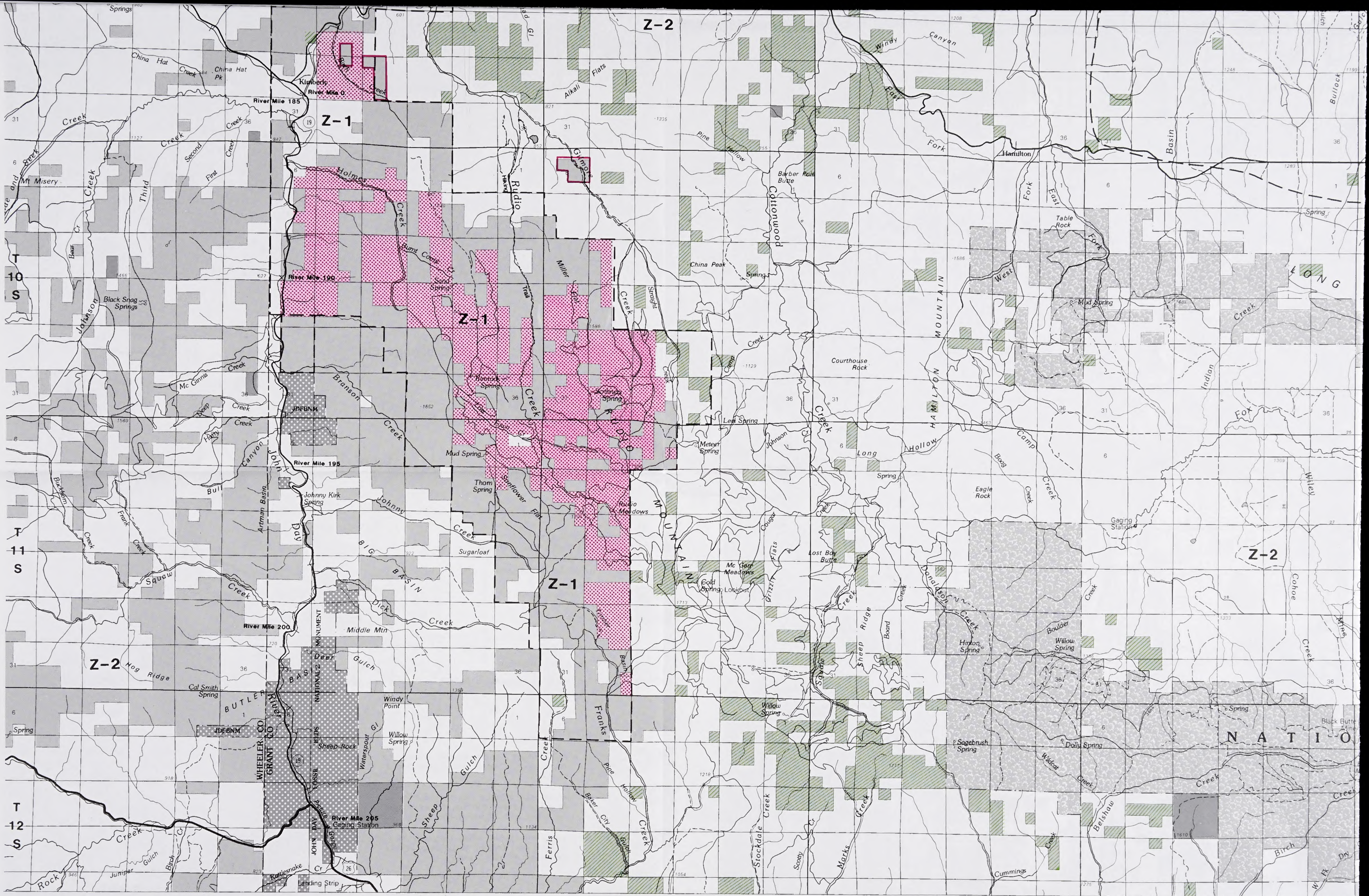
LEGEND

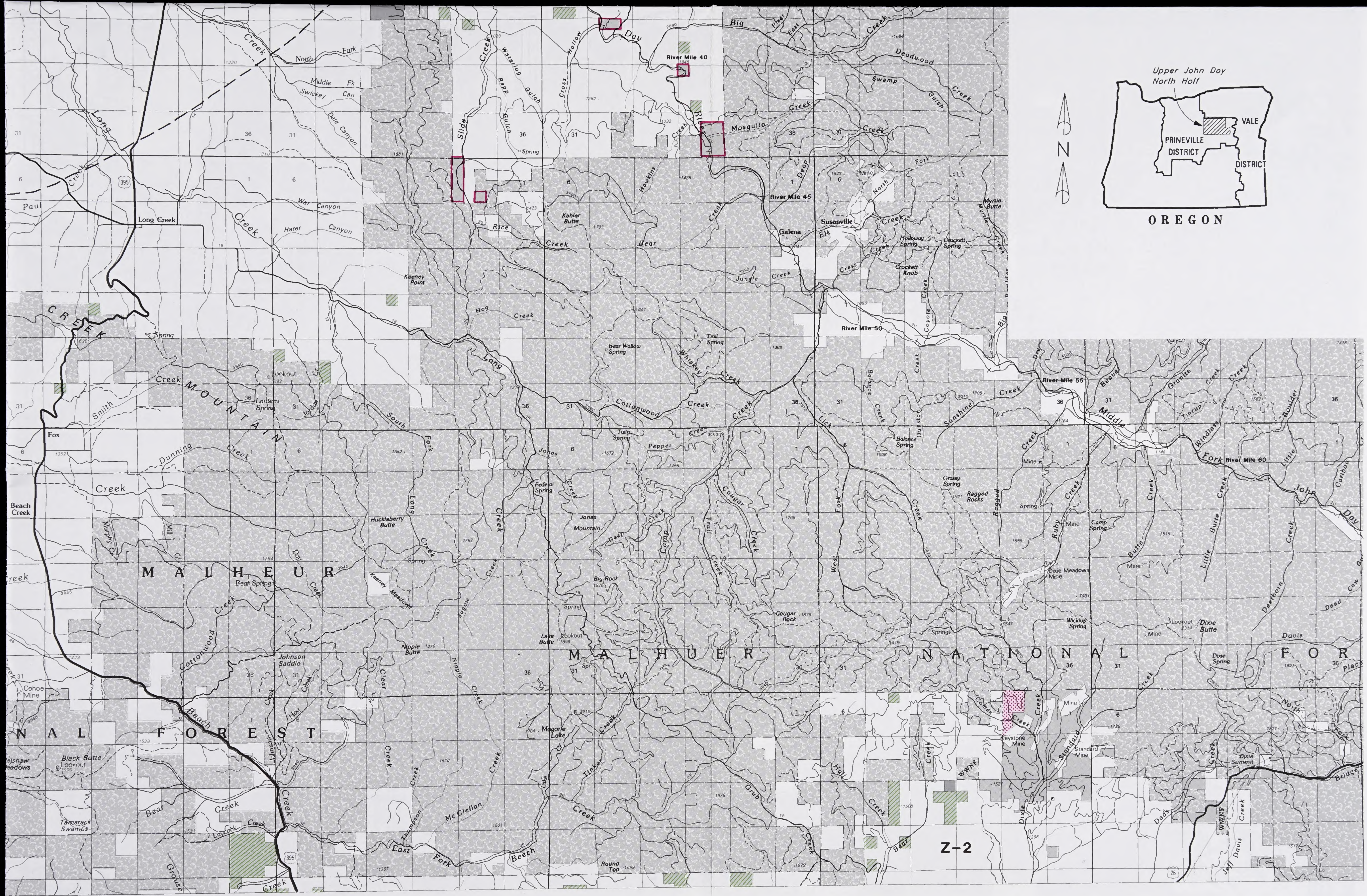
▒	Lands Administered by Bureau of Land Management
░	U.S. Forest Service Lands
▩	National Monument
■	State Lands
□	Private
▨	BLM Lands Selected and Administratively Suitable for Disposal
□	Requested in Original Proposal, but Administratively Unsuitable for Disposal (to be retained)
▦	BLM Acquired

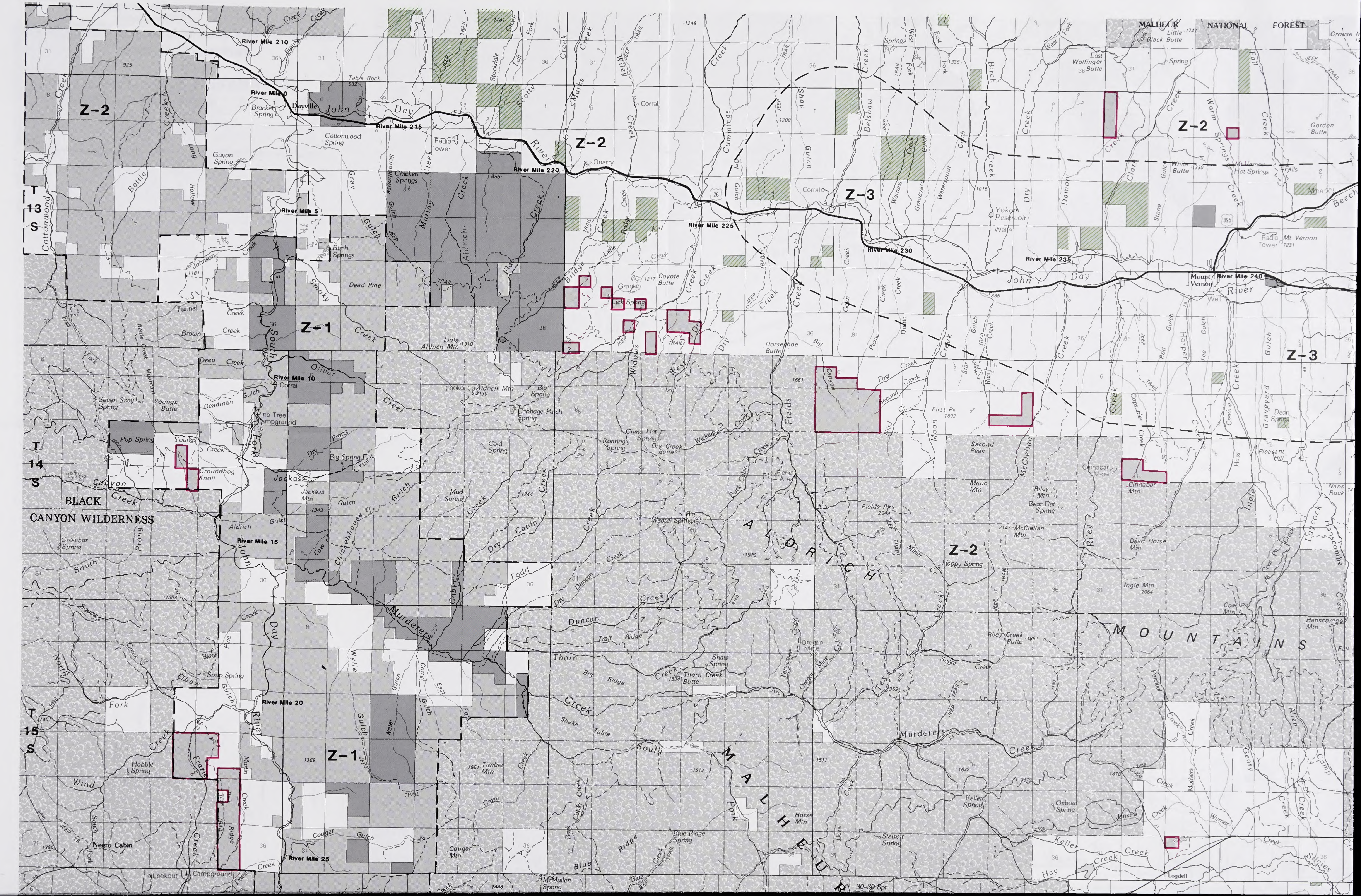
LAND TENURE ZONES

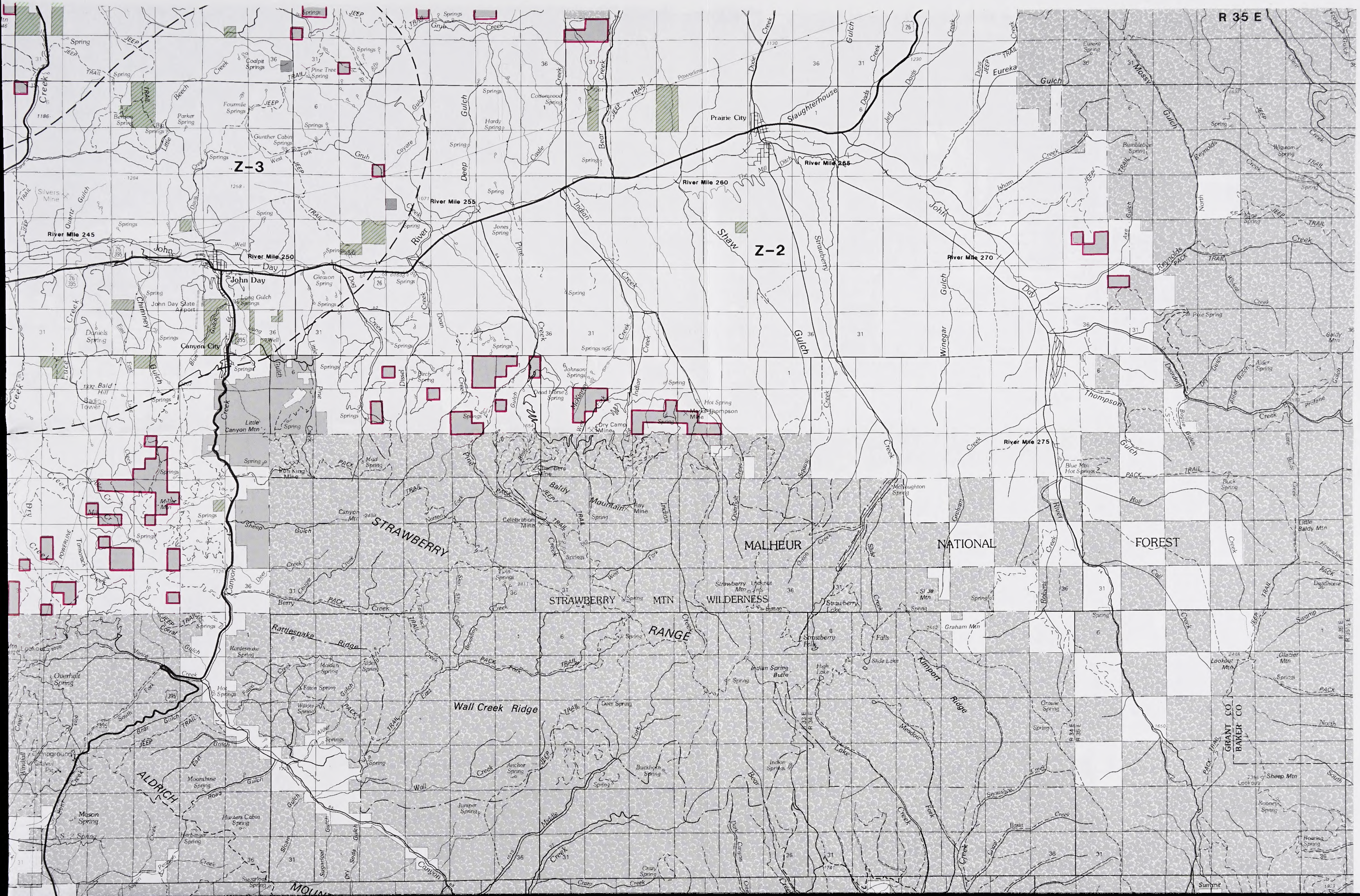
Z-1	Zone 1	— Public lands will be retained or may be exchanged for lands with higher public value.
Z-2	Zone 2	— Areas with potential for high public resource values that may be exchanged for lands with higher public values.
Z-3	Zone 3	— Areas with public lands that may be suitable for transfer to another agency, exchange or public sale.

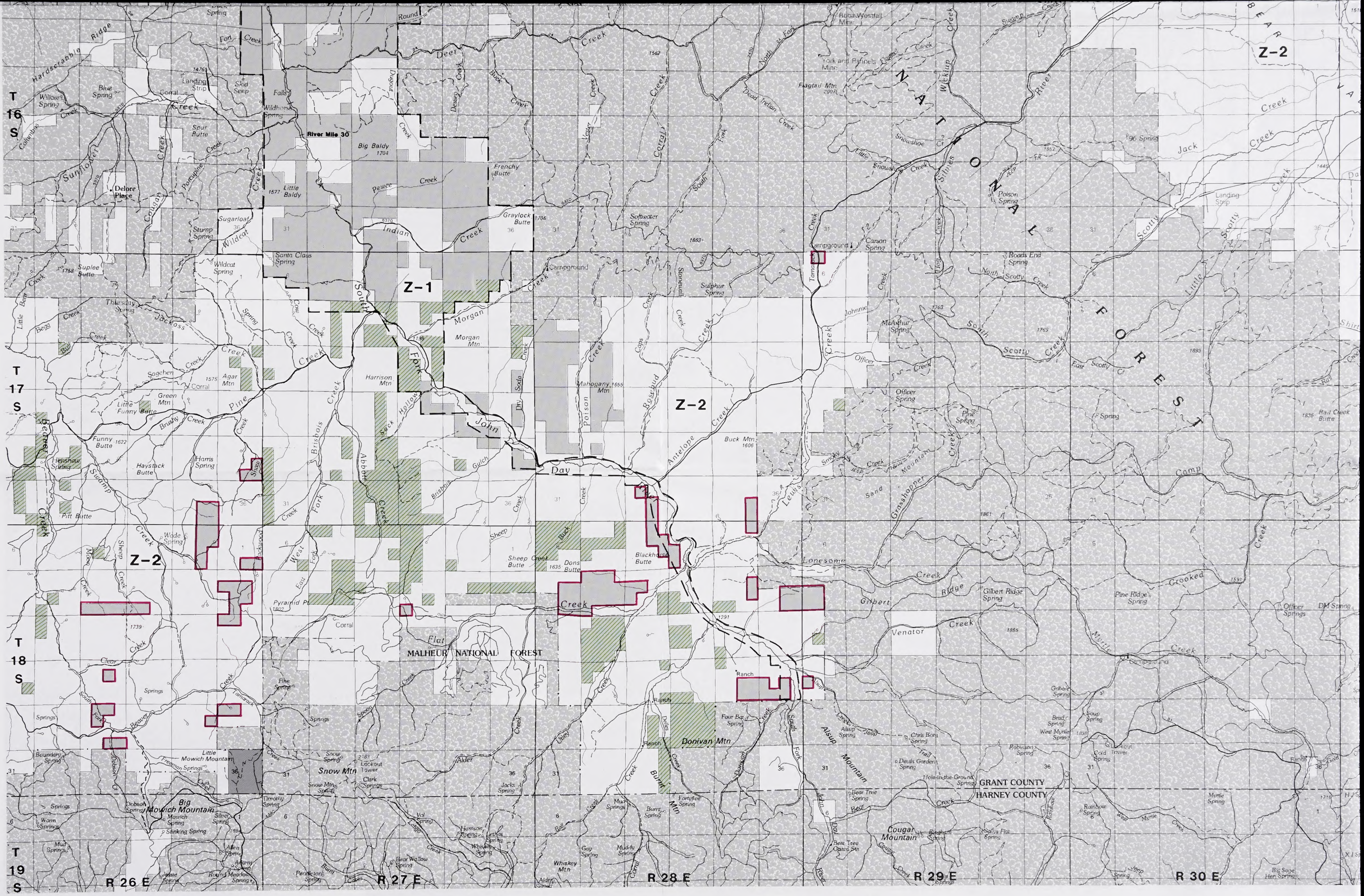
BLM Library
Denver Federal Center
Bldg. 50, OC-521
P.O. Box 25047
Denver, CO 80225

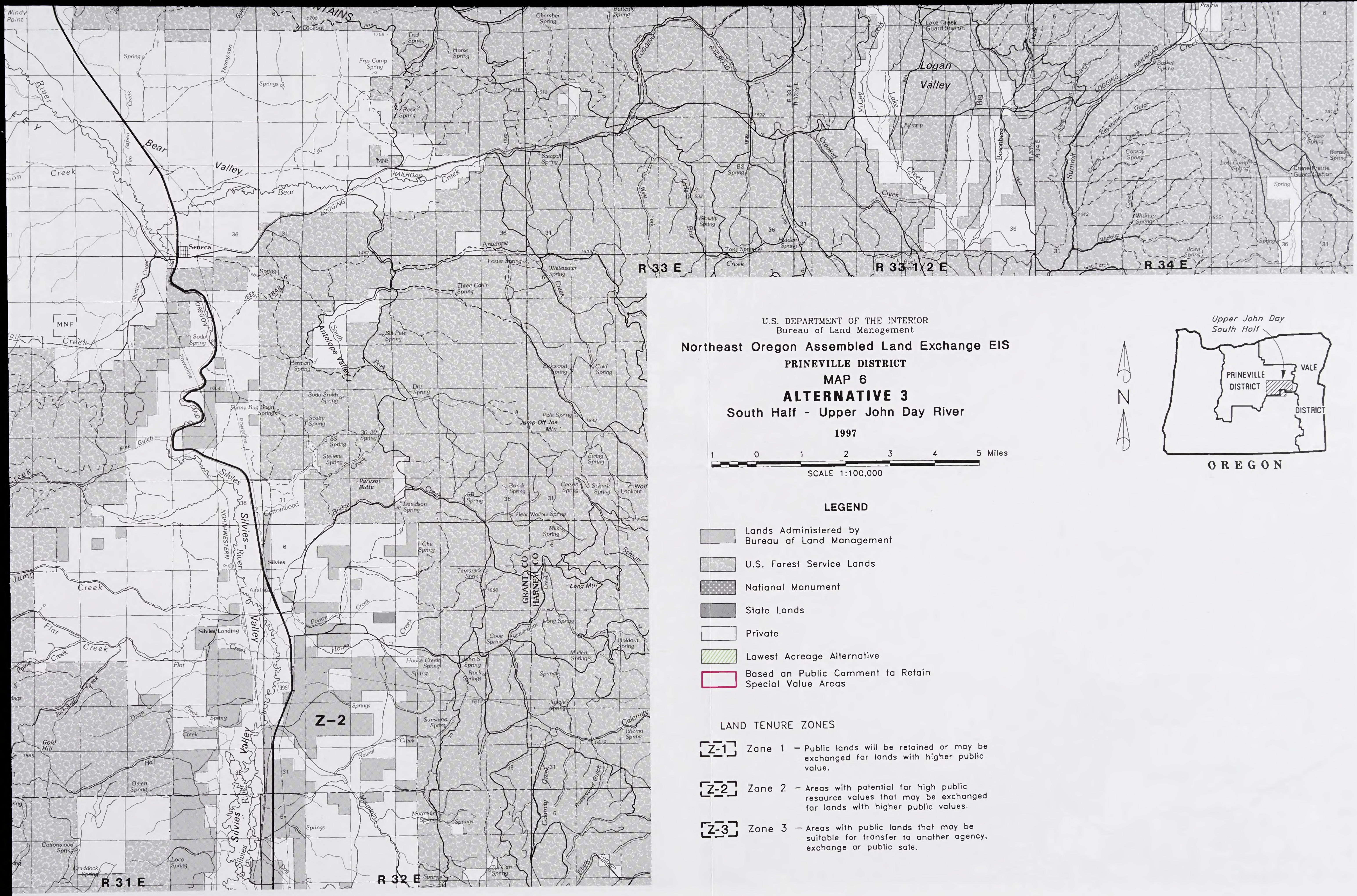

Z-2
Z-1
Z-1
Z-1
Z-2
Z-2
T 10 S
T 11 S
T 12 S
Springs
China Hat Creek
China Hat Pk
Kimberly
River Mile 0
River Mile 185
River Mile 190
River Mile 195
River Mile 200
River Mile 205
Gaging Station
19
26
Mt Misery
Third Creek
Second Creek
First Creek
Bear Cr
Johnson
Black Snag Springs
Mc Ginnis Creek
Deep Creek
Canyon
Bull
Buckhorn
Frank Creek
Artman Basin
Squaw Creek
Hog Ridge
Cal Smith Spring
BUTLER BASIN
WHEELER CO
GRANT CO
JDFBNM
JOHN DAY FOSSIL BEDS NATIONAL MONUMENT
Sheep Rock
Waterspout Gl
Windy Point
Willow Spring
Deer Gulch
Middle Mtn
Dick Creek
BIG BASIN
Sugarloaf
Johnny Kirk Spring
Johnny Creek
John Day River
Branson Creek
Holmes Creek
Burnt Corral Cr
Sand Spring
Rudio Creek
Hiking Trail
Miller Flat
Straight Creek
Rudio Mountain
Rudio Meadows
Sunflower Flat
Thorn Spring
Mud Spring
Spring
Gimore
Alkali Flats
Pine Hollow
Cottonwood Creek
Barber Pole Butte
China Peak
Camp Creek
Courthouse Rock
Lee Spring
Meteer Spring
Johnson Cr
Long Hollow
Long Spring
MOUNTAIN
Cold Spring
Lookout
Mc Garr Meadows
Grizzly Flats
Cougar Creek
Lost Boy Butte
Sheep Ridge
Board Creek
Willow Spring
Stockdale Creek
Scotty Cr
Marks Creek
Windy Canyon
East Fork
Hamilton
Basin
Bullock
Table Rock
West Fork
Mud Spring
HAMILTON MOUNTAIN
LONG
Indian Creek
Fox Creek
Boog Creek
Eagle Rock
Gaging Station
Donaldson Creek
Hinton Spring
Boulder Creek
Willow Spring
Cohoe Creek
Wiley
Sagebrush Spring
Dolly Spring
Wildcat Creek
Belshaw
Birch Creek
Black Butte Mine
NATIO
Cummings
Franks Creek
Baker City Gulch
Pine Hollow
Ferris Creek
Sheep Gulch
Gulch
Rock Creek
Juniper Gulch
Birch Cr
Rattlesnake Cr
Landing Strip
31
36
6
1


Upper John Day North Half
VALE
PRINEVILLE DISTRICT
DISTRICT
OREGON
N
MALHEUR NATIONAL FOREST
MALHEUR
NAL FOREST
CREEK MOUNTAIN
Z-2
River Mile 40
River Mile 45
River Mile 50
River Mile 55
River Mile 60
Long Creek
Fox
Beach Creek
Galena
Susanville
Keeney Point
Kahler Butte
Huckleberry Butte
Jones Mountain
Big Rock
Cougar Rock
Lake Butte
Nipple Butte
Johnson Saddle
Magone Lake
Round Top
Keystone Mine
Standard Mine
Dixie Meadows Mine
Dixie Butte
Dixie Summit
Black Butte Lookout
Tamarack Swamps
Cohoe Mine
Bear Wallow Spring
Trail Spring
Twin Spring
Federal Spring
Lantern Spring
Bear Spring
Balance Spring
Grassy Spring
Ragged Rocks
Camp Spring
Wickiup Spring
Dixie Spring
Holloway Spring
Crockett Spring
Crockett Knob
Myrtle Butte
Middle Fork John Day
Big Creek
Deadwood Creek
Swamp Gulch
Mosquito Creek
Deep Creek
Elk Creek
Cottonwood Creek
Whiskey Creek
Lick Creek
Sunshine Creek
Granite Creek
Beaver Creek
Tincup Creek
Windlass Creek
Boulder Creek
Little Butte Creek
Ruby Creek
Ragged Creek
Camp Creek
Trail Creek
Cougar Creek
Pepper Creek
Hog Creek
Rice Creek
Bear Creek
Slide Creek
Waterlog Gulch
Rapp Gulch
Cross Hollow
Hawkins Creek
Jungle Creek
Coyote Creek
Balance Creek
Smith Creek
Dunning Creek
South Fork
Long Creek
Judge Creek
Nipple Creek
Clear Creek
Keeney Meadows
Cottonwood Creek
Beech Creek
East Fork Beech Creek
Thompson Creek
McClellan Creek
Tinker Creek
Grub Creek
Hall Creek
Bear Creek
Dixie Creek
Dads Creek
Jeff Davis Creek
Deerhorn Creek
Davis Creek
Dead Cow
North Fork
Placer
Caribou Creek
Little Boulder
War Canyon
Harer Canyon
Middle Fk
Swickey Can
Dale Canyon
North Fork
WWNF
395
26
Bridge


Z-1
Z-2
Z-3
T 13 S
T 14 S
T 15 S
BLACK CANYON WILDERNESS
MALHEUR NATIONAL FOREST
ALDRICH MOUNTAINS
MALHEUR
River Mile 0
River Mile 5
River Mile 10
River Mile 15
River Mile 20
River Mile 25
River Mile 210
River Mile 215
River Mile 220
River Mile 225
River Mile 230
River Mile 235
River Mile 240
John Day River
South Fork John Day River
Dayville
Mount Vernon
Logdell
Table Rock
Bracket Spring
Cottonwood Spring
Guyon Spring
Radio Tower
Chicken Springs
Quarry
Corral
Birch Springs
Dead Pine
Little Aldrich Mtn
Lookout Aldrich Mtn
Big Spring
Cabbage Patch Spring
Cold Spring
Mud Spring
Pine Tree Campground
Pup Spring
Youngs Butte
Seven Sixty Spring
Groundhog Knoll
Jackass Mtn
Big Spring
Lick Spring
Grouse
Coyote Butte
Horseshoe Butte
China Hat Spring
Roaring Spring
Dry Creek Butte
Picnic Area
Fields Pk
Weasel Springs
First Pk
Second Peak
Moon Mtn
Riley Mtn
Bear Flat Spring
McClellan Mtn
Happy Spring
Cinnabar Mine
Cinnabar Mtn
Dead Horse Mtn
Ingle Mtn
Coal Pit Mtn
Hanscombe Mtn
Riley Creek Butte
Oregon Mine
Shaw Spring
Thorn Creek Butte
Timber Mtn
Horse Mtn
Keller Spring
Oxbow Spring
Stewart Spring
Blue Ridge Spring
Cougar Mtn
McMullen Spring
Lookout
Campground
Negro Cabin
Hobble Spring
Crowbar Spring
Soup Spring
Yokum Reservoir
Well
Mine
Radio Tower
Mt Vernon
Mt Vernon Hot Springs
White Butte
East Wolfinger Butte
Little Black Butte
Gordon Butte
Pleasant Hill
Dean Spring
Nans Rock
Falls
30-30 Spr
Murderers Creek
Duncan Creek
Thorn Creek
Big Ridge
Shake Table
Wind Creek
JEEP TRAIL


R 35 E
Z-3
Z-2
River Mile 245
River Mile 250
River Mile 255
River Mile 260
River Mile 265
River Mile 270
River Mile 275
John Day
Canyon City
Prairie City
John Day State Airport
Little Canyon Mtn
Canyon Mtn
STRAWBERRY
STRAWBERRY MTN WILDERNESS
STRAWBERRY RANGE
Strawberry Mtn Lookout
Strawberry Lake
Strawberry Falls
MALHEUR
NATIONAL
FOREST
Baldy Mountain
Rattlesnake Ridge
Wall Creek Ridge
Kimport Ridge
ALDRICH
Graham Mtn
Lookout Mtn
Glacier Mtn
Sheep Mtn
Little Baldy Mtn
Baldy Mtn
Slide Lake
High Lake
Indian Spring Butte
Blue Mtn Hot Springs
Dry Camp Mine
Marks Thompson Mine
Hot Spring
Celebration Mine
Chambers Mine
Ray Mine
Von King Mine
Silvers Mine
Bald Hill
Radio Tower
Slaughterhouse Gulch
Dixie Creek
Shaw Gulch
Strawberry
Winegar Gulch
Dry Fork
Thompson Gulch
Reynolds Creek
Mossy Gulch
Eureka Gulch
Deep Gulch
Grub Creek
Canyon Creek
Indian Creek
Pine Creek
Dog Creek
Beech Creek
Chimney
Sheep Gulch
Bear Gulch
Vance Creek
Moonshine Spring
Hunters Cabin Spring
Mason Spring
Overholt Spring
Campground
Gravel Pit
Powerline
POWERLINE
JEEP
TRAIL
PACK
GRANT CO
BAKER CO
R 34 E
R 35 E
R 33 E
R 32 E
26
395
6
1
31
36


Z–1
Z–2
Z–2
Z–2
Z–2
NATIONAL FOREST
MALHEUR NATIONAL FOREST
GRANT COUNTY
HARNEY COUNTY
T 16 S
T 17 S
T 18 S
T 19 S
R 26 E
R 27 E
R 28 E
R 29 E
R 30 E
River Mile 30
Big Baldy
Little Baldy
Frenchy Butte
Graylock Butte
Sugarloaf
Santa Claus Spring
Morgan Mtn
Harrison Mtn
Mahogany Mtn
Buck Mtn
Agar Mtn
Green Mtn
Funny Butte
Haystack Butte
Pitt Butte
Wade Spring
Sheep Creek Butte
Dons Butte
Blackhorse Butte
Pyramid Pt
Donivan Mtn
Snow Mtn
Big Mowich Mountain
Little Mowich Mountain
Alsup Mountain
Cougar Mountain
Flagtail Mtn
Delore Place
Hardscrabble Ridge
Sunflower
Deer Creek
Indian Creek
John Day
South Fork
Antelope Creek
Lonesome
Gilbert
Venator Creek
Grasshopper
Scotty Creek
Jack Creek
Murderers Creek
Bear Creek
Gilbert Ridge Spring
Pine Ridge Spring
Officer Spring
Rail Creek Butte
Poison Spring
Campground
Roba Westfall Mine
York and Rennels Mine
Landing Strip
Lookout Tower
Ranch



U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Northeast Oregon Assembled Land Exchange EIS

PRINEVILLE DISTRICT

MAP 6

ALTERNATIVE 3

South Half - Upper John Day River

1997

SCALE 1:100,000 (1 0 1 2 3 4 5 Miles)

LEGEND

- ▨ Lands Administered by Bureau of Land Management
- ▨ U.S. Forest Service Lands
- ▨ National Monument
- ▨ State Lands
- ☐ Private
- ▨ Lowest Acreage Alternative
- ☐ Based on Public Comment to Retain Special Value Areas

LAND TENURE ZONES

Z-1 Zone 1 – Public lands will be retained or may be exchanged for lands with higher public value.

Z-2 Zone 2 – Areas with potential for high public resource values that may be exchanged for lands with higher public values.

Z-3 Zone 3 – Areas with public lands that may be suitable for transfer to another agency, exchange or public sale.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Prineville District Office
3050 N.E. Third
Prineville, Oregon 97754

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

FORWARDING AND ADDRESS
CORRECTION REQUESTED

PRIORITY MAIL
POSTAGE & FEES PAID
Bureau of Land Management
Permit No. G-76